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REPORTS

FROM

COMMITTEES:

ELEVEN VOLUMES.

—(9.)—

SCIENTIFIC INSTITUTIONS (DUBLIN).

Session

4 *February* — 29 *July* 1864.

VOL. XIII.

1864.

REPORTS FROM COMMITTEES:

1864.

ELEVEN VOLUMES:—CONTENTS OF THE

NINTH VOLUME.

N. B.—*THE* Figures *at the* beginning of the line, *correspond with the* N° *at the foot of each* Report; *and the* Figures *at the* end of the line, *refer to the* MS. Paging *of the Volumes arranged for The House of Commons.*

SCIENTIFIC INSTITUTIONS (DUBLIN).

495. REPORT from the Select Committee appointed to inquire into the Condition of the SCIENTIFIC INSTITUTIONS of DUBLIN which are assisted by Government Aid; together with the PROCEEDINGS of the COMMITTEE, MINUTES of EVIDENCE, APPENDIX and INDEX, p. 1

REPORT

FROM THE

SELECT COMMITTEE

ON

SCIENTIFIC INSTITUTIONS (DUBLIN);

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

APPENDIX, AND INDEX.

Ordered, by The House of Commons, *to be Printed,*
15 *July* 1864.

Lunæ, 11° *die Aprilis*, 1864.

Ordered, That a Select Committee be appointed to inquire into the condition of the Scientific Institutions of Dublin which are assisted by Government Aid.

Lunæ, 18° *die Aprilis*, 1864.

Select Committee nominated:—

Mr. Gregory.	Mr. O'Reilly.
Lord Henry Lennox.	Mr. Dillwyn.
Sir Robert Peel.	Sir Edward Grogan.
Mr. Luke White.	Mr. George.
Mr. Lygon.	Mr. Leader.
Sir Colman O'Loghlen.	Mr. Lefroy.
Mr. Cogan.	Mr. Waldron.
The O'Conor Don.	

Ordered, That the Committee have power to send for Persons, Papers, and Records.

Ordered, That Five be the Quorum of the Committee.

Jovis, 21° *die Aprilis*, 1864.

Ordered, That the Report upon the Royal Dublin Society Museum of Irish Industry, and the System of Scientific Instruction in Ireland, 1863:

Copy of Memorial, &c. of Royal Dublin Society, 1864, No. 122:

Public Institutions, Return, 1861, No. 444:

National Collections, Return, 1861, No. 302:

Copy of Memorials and Correspondence respecting any increase of Public Grants to the Royal Dublin Society, 1862, No. 264:

Copy of Correspondence on the proposed amalgamation of the Museum of Irish Industry with the Royal Dublin Society, 1863, No. 401:

Report of Select Committee, 1836, No. 445; and Evidence;

And, Return of Votes for Museum of Irish Industry, 1854, 331, LVIII. 387:

be referred to the Committee.

Veneris, 15° *die Julii*, 1864.

Ordered, That the Committee have power to report their Observations and Opinion, together with the Minutes of Evidence taken before them, to The House.

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PROCEEDINGS OF THE COMMITTEE - - - - - - p. v
MINUTES OF EVIDENCE - - - - - - - - p. 1
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REPORT.

THE SELECT COMMITTEE appointed to inquire into the Condition of the Scientific Institutions of *Dublin*, which are assisted by Government Aid:——Have considered the Matters to them referred, and have agreed to the following REPORT:

Your Committee consider it advisable to give a preliminary sketch of each of these Societies. They are four:—

The Royal Dublin Society.
The Museum of Irish Industry.
The Royal Zoological Society, and
The Royal Irish Academy.

Royal Dublin Society.

"The Royal Dublin Society had its origin in a private association formed in "A. D., 1731, 'for improving husbandry, manufactures, and other useful arts "and sciences.' The association was incorporated in 1749, and by successive "Acts of the Irish Parliament, it was entrusted with the formation and manage- "ment of drawing schools, a botanic garden, and a museum of natural history. "In order to make the two last named establishments more useful for educa- "tional purposes, professorships were established in botany, chemistry, "mineralogy, and natural philosophy; and as books were required for the use "of the teachers and students, a library was formed, which gradually acquired "a more extended public character. Until 1836, the business of the Royal "Dublin Society was transacted by the body at large; but in that year a select "Committee of the House of Commons reported upon the institution, and, "among other improvements, recommended by them, an executive council was "formed to conduct the affairs of the Society under the control of the body at "large. In 1854, the Society was relieved from the superintendence of its "educational staff, in order that the latter might be made available to the "public for instruction by means of the illustrations of the two separate "museums of the Royal Dublin Society and of Irish Industry; but a right of "admission was reserved in favour of the members of the Royal Dublin Society "to all lectures similar to those previously given, whether they took place in the "theatre of the Society or in that of the Museum of Irish Industry. In con- "sideration of their advanced period of life, the existing professors of chemistry "and mineralogy were exempted from this arrangement, upon the understanding "that successors would not be appointed to them; but, on the decease of the "professor of chemistry, permission was given for the appointment of a suc- "cessor to him at the Royal Dublin Society, with especial reference to the "application of chemical science to the improvement of agriculture." (Report of Treasury Commission, 1862, p. 3).

By the Act of Union of Great Britain and Ireland, a grant of 10,000 *l.* was secured to the Society for 20 years; it was then reduced to 7,000 *l.* until 1830. After that period it appears to have averaged 5,300 *l.* a-year until the year

1854, when a new arrangement was made in relation to the professors, and the grant was fixed at 6,000 *l.*, out of which 500 *l.* was held in trust for the Royal Zoological Society. A small addition of 150 *l.* was recently made to that amount to defray the expenses attending the opening of the Botanic Gardens on Sundays. The income of the Royal Dublin Society is derived, first, from the Parliamentary grant, which has already been stated; 2dly, from the members' admission fees and annual subscriptions, which have amounted, on the average of the last six years, to 1,300 *l.* a year; and, 3dly, from various miscellaneous receipts, such as admission fees at cattle shows, &c., which are the proceeds of the application of the two preceding funds.

By the Charter of Incorporation in 1749, the Society was designated as the Dublin Society for the promotion of Husbandry and other useful Arts in Ireland. In 1785, the Act of Parliament, containing the Grant, provided for the cultivation of "such useful Sciences as the Society should think fit." The Society in the year 1821 having been honoured by the patronage of his late Majesty King George IV., assumed the title of Royal Dublin Society, the name by which it has been subsequently commonly known, and thus designated in several Acts of Parliament.

The Objects of the Society.

The original object of the Society was the encouragement of agriculture and the industrial arts. Subsequently, by various Acts of Parliament, other functions were entrusted to its administration thus:—By 25 Geo. 3, c. 61, drawing schools were founded and placed under its management, and annual grants of money were made to the Society by Parliament for their support.

By another Act of Parliament, the 30 Geo. 3, c. 28, the Botanic Garden was founded, and grants of money were also annually voted for its maintenance.

The present Museum of Natural History in like manner owes its origin to the Irish Parliament, which by Act 32 Geo. 3, c. 14, authorised the purchase of an extensive collection known as the Leskean Collection, and supplied the funds for that purpose; also voting the Society an annual grant for its maintenance.

In order to render the above-mentioned departments more publicly useful, professorships were established in mineralogy, chemistry, botany, and natural philosophy; and in order to supply the professors and students with the necessary books, the library was formed, which gradually assumed most of the characters of a public library, and money was voted annually by Parliament for its support.

In reference to the administration of the affairs of the Society, it should be observed that, according to its original constitution, the business was, until the year 1836, transacted by the body at large. But, in consequence of the recommendation of the Committee of the House of Commons in the year 1836, a Council was formed to act as the executive for conducting the affairs of the Society, under the control of the body at large.

In the year 1854 the educational staff was removed from the Society's superintendence, and their services were made available for illustrating the collections formed in the Museum of Irish Industry as well as those of the Society.

The professors of chemistry and mineralogy were exempted from this arrangement, for, according to the Minute of the Board of Trade of 1854, neither their existing duties nor salaries were to be interfered with, upon the understanding that these offices should not be continued beyond the period of their lives respectively. However, upon the death of the professor of chemistry, the Society was permitted to elect a professor whose duties should be limited to agricultural chemistry.

The arrangements thus briefly described have continued in force to the present time; but, in consequence of repeated representations made by the Royal Dublin Society to the Department of Science and Art, as to the unfinished state of several of its departments from want of the necessary funds to complete them, the Treasury appointed a Commission to inquire into the state of the Royal Dublin Society, as well as of the other institutions of Dublin in receipt of Government grants, the result of which inquiry was a report, which was laid before Parliament in the course of the Session of 1862-63.

Having

Having thus briefly traced the history of the Royal Dublin Society, its present position and requirements may be considered in detail under the following heads :—

Constitution of the Society.
Agricultural Department.
Manufacture.
Museum of Natural History.
Botanical Garden.
Library.
School of Art.

1. *Constitution of the Society.*

The work of the Institution is carried on by means, 1st, of the Society meeting in its corporate capacity ; 2d, by the Council, and 3d, by the several Committees.

The Society consists of nearly 1,200 members representing their educated classes of every rank in Ireland. It meets in its corporate capacity on the first Thursday of eight months in the year. It alone has the power of electing members, appointing or removing officers, and of making, amending, and repealing bye-laws.

The Council has been constituted in accordance with the recommendation of the Select Committee of the House of Commons of 1836.

In the words of the Report of the Commissioners of 1862, "The Council consists of the seven Vice-Presidents and two Honorary Secretaries of nine members elected by the Society (not being members of any of the Standing Committees) and of two members chosen by and out of each of the Standing Committees, being 34 members of Council in all."

"Any order of the Council may be rescinded at a meeting of the Society "after notice has been given in a prescribed form. One great defect of this "constitution has, however, come fully to light. In the case of other large "societies with considerable sums of money to disburse and numerous officers "to control, full powers are vested in an executive Council acting on behalf of "the Society. The absence of any such provision in this instance has prevented "the Council from acting with the decision and confidence which it would otherwise have done, and has led to insubordination on the part of some of its officers. "It has also impaired the general usefulness of the Society in this respect. "The Government cannot properly intrust the Society with the disbursement of "public money without being assured that every necessary condition will be "carefully observed, and it is obvious that this assurance cannot exist while all "the decisions of the Council are liable to be reversed by a popular vote." Committee, 1862, p. 5.

The constitution of the Council recommended by the Commissioners is, that it should consist of the seven Vice-Presidents and two Secretaries, who should be, as at present, elected annually ; of 15 members elected by the Society at large, five of whom should retire each year, but with eligibility for re-election, and of the Chairman or Vice-Chairman of each of the Standing Committees, which should not exceed eight in number ; thus constituting a Council of not more than 33 in number. To the Council, as thus constituted, should be delegated the general management of the affairs of the Society, with full power in all cases to act on its behalf. This body should also have the exclusive control of all the Society's paid officers and servants, including the power of appointing and dismissing them as well as of regulating their duties.

The Standing Committees appear to have been constituted in accordance with the recommendation contained in the Report of the Committee of 1836, and are at present as follows :—

1. Committee of Agriculture.
2. „ Botany.
3. „ Fine Arts.
4. „ Chemistry.
5. „ Natural History.
6. „ Library.
7. „ Manufactures.
8. „ Natural Philosophy.

In addition to the standing committees, as above named, the Society has found it necessary to constitute others for special purposes; thus, a committee for the management of the evening scientific meetings has been constituted, as well as committees of the council, to regulate, 1st, All matters relating to the care and maintenance of the house and its establishment; 2, To superintend the financial department; and 3, To regulate the printing of the Society's proceedings and publications.

2. *Agricultural Department.*

The operations of this Department consist—

1. The holding of two Agricultural Shows annually; one at spring, consisting chiefly of breeding stock; the other at Christmas, consisting of fat stock, and of farm and dairy produce.

2. The maintenance of a Museum of Agriculture.

3. The delivery of courses of Public Lectures by the Professor of Agriculture; practical evening demonstrations in Analytical Agricultural Chemistry to working students in the laboratory; and Chemical Analyses, and examinations of manures, soils, and agricultural produce, performed by him for the members of the Society and the public, according to a scale of fees.

Agricultural Shows.

These exhibitions, especially those held in spring, must be regarded as of the greatest importance to the country. To these, in connection with the annual exhibition of the Royal Agricultural Society, may be, in great part, traced the introduction of the best breeds of cattle into Ireland, and their spread into districts where, some years ago, they were unknown.

It also appears that these exhibitions attract a greater number of exhibitors of neat cattle than any similar show in the United Kingdom, and that stock is sent to them for exhibition, not only from all parts of Ireland, but also from England and Scotland. They also attract a number of the leading makers of agricultural machines, not only in Ireland, but also in the sister kingdom.

The Christmas show is one of mixed character, being for fat stock, and the produce of the farm and dairy. Although these shows are, so far as the number of animals exhibited, not by any means as extensive as the spring shows, yet their importance cannot be overrated. It is generally felt, that if the Society were enabled to offer prizes at all equivalent in amount to those given elsewhere, that these shows would be in every respect improved. The collection of farm produce exhibited on these occasions is also of much interest.

The Royal Agricultural Society of Ireland cannot undertake these shows, not having premises for the purpose, and their functions being exclusively confined to the holding of shows in the province.

For the purposes of these periodical exhibitions, it became necessary that covered accommodation should be provided; hence, some years since the Society proceeded to raise from the members and the public a sum sufficient to erect a building known as the Agricultural Hall, the entire cost of which amounts to upwards of 5,000 *l.*, no portion of which has been supplied by the State. In late years it was found the Society agreed that the agricultural show could not be held, as heretofore, on the lawn; it therefore became necessary to confine it to the Agricultural Hall, and other portions of the Society's premises. The space thus afforded would, however, have been totally inadequate for the purpose, were it not that a portion of ground adjoining was offered for purchase. Negotiations were immediately set on foot to secure this desirable holding, and at the same time it was stated to the Government that a sum of 3,000 *l.* would enable the Society to effect their object, and that they should recommend Parliament to grant them this sum in lieu of the rent of the National Gallery, amounting to 100 *l.* a year, as agreed to by the Department of Science and Art.

The

The Government having postponed from time to time assenting to this proposal, and it appearing that, unless prompt measures were adopted to secure the premises in question, they must unavoidably pass into other hands, a number of the leading members of the Society undertook the responsibility of guaranteeing the amount of the purchase-money, upon the security of which guarantee the Bank of Ireland advanced the sum required, and possession of the ground has been so far secured. Still individual members are liable for the purchase-money, their guarantee varying in amount from 500 *l.* to 50 *l.*, a state of things which should not be permitted to continue.

It may be also stated that a considerable sum of money has been raised from the public for the erection of additional sheds (coloured pink on the ground-plan). *Vide* Appendix.

The entire sum allocated in 1863 out of the Parliamentary Grant was 187 *l.*

The Agricultural Museum.

The Agricultural Museum is contained in a building which, although not such as is desirable, yet, in extent of the accommodation it affords to the collection, it is suited for the purpose.

The collections are tolerably complete, are well arranged, and are highly instructive to the agricultural classes of the people, who visit it in large numbers. The collections are chiefly formed by donations. It contains a fine series of cereals, and casts in wax of vegetable produce, purchased some years ago from the Messrs. Lawson, of Edinburgh. It contains also a fine collection of preparations illustrative of the diseases of horses, made by the former professor of veterinary surgery.

The entire sum at present appropriated from the Parliamentary Grant for this Department is as follows:—Salary of Curator and Superintendent of the Shows, 150 *l.*; wages to the Porter, and contingencies, 88 *l.*; and a temporary sum of 120 *l.* for the improvement of the building, the necessity for continuing which will soon cease.

Agricultural Chemistry.

Ample accommodation exists in the Society's Laboratory and adjoining rooms to enable the Agricultural Chemist to carry out those functions which may be assigned to him. The Laboratory is commodious and fitted up with useful appliances. The sum appropriated for the maintenance of the Department is stated to be inadequate: Professor's salary, 150 *l.*; Porter, 52 *l* ; apparatus and chemicals, 28 *l.*;—total, 230 *l.*

3. *Manufactures.*

The efforts which the Society has made for promoting the development of manufacturing industry in Ireland have been carried into effect through the agency of the Committee of Manufactures, to whom the duty of organizing periodical industrial exhibitions has been entrusted.

These exhibitions were originated in the years 1834–35, and were held triennially until 1853, when the exhibition to be held in that year was merged into the Great Industrial Exhibition, which owed its existence to the liberality of Mr. William Dargan; of late years these exhibitions have been revived. One (of the Fine and Ornamental Arts) was held in the year 1861, and another (of Irish Manufactures, of Home and Foreign Machinery suited to manufacturing purposes, and Fine Arts) is now in course of being held by the Society. These latter exhibitions differ in the mode in which they have been organized from those which preceded them. Being held on a much more extensive scale, the expense attending these arrangements has, to the same extent, largely increased; hence the Society has been compelled to seek from the general public—for whose benefit such exhibitions are held—a guarantee that they will bear the Society harmless should any pecuniary loss arise from the undertaking; this appeal has on both occasions been met by the public most liberally. The amount of the Guarantee Fund for the Exhibition of 1861, as well as for that of

the present year, reached to about 10,000 *l.*, being a much greater sum than the Society required. A sum of 150 *l.* has been annually granted out of the Parliamentary Vote in aid of these exhibitions, and the Council have applied that this sum should be increased to 300 *l.*

4. *Museum of Natural History.*

The Museum of Natural History owes its origin to an Act of the Irish Parliament (32 Geo. 3, c. 14), by which an extensive collection of specimens of Natural History, but chiefly of minerals, was purchased, and entrusted by the same authority to the Society, in whose hands, owing to the annual grants from Parliament, but mainly from private donations, the collection thus formed expanded into the present extensive Museum of Natural History.

For many years the Museum was in a very defective state, chiefly in consequence of insufficient accommodation. In the year 1854, however, the Society obtained a grant from Parliament of 5,000 *l.* for the erection of a suitable building, on condition that the Society should raise from other sources a sum amounting to at least 2,500 *l.* This condition the Society has more than fulfilled, having by its exertions raised for this object nearly 6,000 *l.*, which, together with the sum voted by Parliament before referred to, and a further grant of 800 *l.* for fittings, have been entirely expended. The Museum is still unfinished, and cases for the reception of the specimens are necessary. For these a sum of 4,500 *l.* is estimated; in reference to which the Treasury Commissioners observe, "that it is desirable that these funds should be provided," in order that the large "sum already expended may be turned to some useful "account, and that the deterioration of the articles stowed away in packing-"cases, or standing exposed in unaired rooms, may be arrested."

Vide Appendix. The entire sum now available for the support of the Museum is 650 *l.* The Council of the Society consider that a sum of 1,700 *l.* is required fully to maintain it.

5. *Botanic Garden.*

The Botanic Garden was founded in the year 1790 by Act of Parliament (30 Geo. 3, c. 28), and money was voted to the Society for the purchase of the ground, and it has since been maintained by annual Parliamentary Grants. The garden contains 43 statute acres, laid out most tastefully, and, considering the small amount available for its support, is creditably maintained. Judging from the very large numbers who visit the gardens, especially on Sundays, Your Committee infer that the garden is a highly popular department of the Society; and not only on this account, but considering its importance in a scientific and educational point of view, they consider it is deserving of liberal support.

The gardens are now open on four days in the week as well as Sundays, from half-past two o'clock in the afternoon, free; and on two days at 6 *d.* for adults, and 3 *d.* for children.

According to the Report of the Commissioners of 1862, a sum of 1,000 *l.* for building a Museum of Economic Botany was recommended.

The Council of the Royal Dublin Society have since obtained, from the Architect of the Board of Public Works in Ireland, a more accurate estimate of the cost of completing such a building, which is stated to amount to 3,000 *l.* Owing to the extreme narrowness of the passages in the conservatories, great inconvenience has been felt by the large concourse of persons who now visit the gardens at one time. As the only remedy for this evil is by doubling the houses, the Council also obtained an estimate from the same officer of the cost of the alteration, which amounts to 3,000 *l.*

The Council have also introduced an item under the head of Nursing and Propagating Houses, which are, in their opinion, necessary for the work of the garden; also one for rebuilding the dwelling-house of the Curator, which has been long since reported upon as being in a state beyond the possibility of substantial repair, amounting to 700 *l.*

The doubling of the conservatories involves the necessity of the removal of the rooms for the apprentices, and of building a new set of apartments, the

cost

cost of which is estimated at 300 *l.* To these must be added a sum of 230 *l.*, for finishing the Palm-house recently erected by the Board of Public Works.

The Council are fully impressed with the necessity of having these works executed, and trust that provision shall be made for it accordingly; the entire sum would not all be required in one year.

6. *Library.*

The Library has grown to its present magnitude chiefly through purchases, but also to a considerable extent by donations. Although ample available space exists for its proper arrangement, yet, from want of funds for shelvings and fittings, a large number of the books remains almost inaccessible. The Society should therefore be, as soon as possible, placed in funds to fit up and finish this Department, for which a sum of 1,405 *l.* 10 *s.* has been estimated.

7. *School of Art.*

The School of Art is placed in connection with the Society by the Department of Science and Art, and is governed by the Council according to the rules laid down for the management of the several Schools of Art throughout the Kingdom. It is stated on evidence to be in a very efficient state.

Museum of Irish Industry.

In the year 1844 the Government determined not only to give increased efficiency to the Museum of Economic Geology, then temporarily established in Craig's-court, Charing Cross, and now the Museum of Practical Geology in Jermyn-street, but also to found a similar one at Dublin. This is apparent from the letter of the Chief Commissioner of Woods and Forests, Lord Lincoln (now Duke of Newcastle), to whom the carrying out of this resolution was entrusted. It is dated 13th January 1845, and will be found at length in the Appendix. 1924.

From this letter it is clear that the contemplated Irish Museum was intended to be for the Irish branch of the geological survey what the London Museum was for that of England. 1924–25.

In the course of the correspondence arising out of the offer of the position of Curator and Chemist to Sir R. Kane, Sir Robert laid before Lord Lincoln the views on an economic or industrial survey of Ireland, which he had submitted to Lord Adare's Commission in 1842, and urged upon him the importance of extending the objects of the new institution to the Industrial Arts generally. The Government, however, decided upon confining the objects of the Irish institution, in a great measure, to those of the kindred institution in London. Lord Lincoln's letter, above referred to, shows, however, that his Lordship was prepared to allow the Irish institution, in addition to the special objects for which it was originally intended, to embrace others suggested by the peculiar circumstances of Ireland. It was evidently with this view that Sir Robert Kane was promoted from the subordinate position of Chemist and Curator, under Sir H. De la Beche, to that of Director. In 1847, when Lord Morpeth, now Earl of Carlisle, became Chief Commissioner of Woods, Sir R. Kane again recommended the enlargement of the scope of the museum so as to embrace manufactures generally, and suggested that the name should be changed so as to express this enlargement of the objects of the museum. Lord Carlisle proposed the name, Museum of Irish Industry, by which the institution has since been designated. 1286. 1396. 1286. 1411. 1451.

The premises in Stephen's Green, which had formerly been a private residence, were acquired in 1846. Some rooms were at once temporarily fitted up to receive the collections of minerals, rocks, fossils, and of the Irish fauna and flora, made under the direction of the late General Portlock by the officers of the Ordnance Survey of Ireland, and which were then in charge of the local director of the Geological Survey of Ireland, Captain, now Colonel Sir Henry James. The offices of the Survey were also transferred there. The length of time occupied in the erection of the buildings of the new museum from 1847 to 1852 was very 1924. 3202. 3227.

injurious to the development and arrangement of the collections, and to the work of the chemical officers. The total amount voted was inadequate to produce an effective building, and contrasts unfavourably with the sum voted for the corresponding institution in Edinburgh, the Industrial Museum of Scotland; the cost of the site of the latter alone being nearly as much as the total cost of the new buildings of the Museum of Irish Industry.

The Museum of Irish Industry will be best described under the following separate heads:—

I. *The Museum proper.*
II. *The Chemical Department.*
III. *The Library.*
IV. *The School of Applied Science.*

I. *The Museum.*

The collections at present in the Museum may be classed under three heads:—

The Mineral, Rock, and Palæontological Collections.
The Technological Collections.
The Portlock Collection of the Irish Fauna and Flora.

The Mineralogical collections may be grouped into three series; an extensive collection of typical specimens, illustrative of the physical structure and external properties of minerals, including their crystalline form, models of the complete forms, and most of the instruments used in examining minerals; a general collection of minerals, illustrating their chemical classification, and serving as the basis of the technical series, illustrative of the direct uses of minerals for ornamental and decorative purposes.

The Rock collections consist mainly of three series; a typical series of rocks as far as possible from Irish sources; a collection of foreign igneous and metamorphic rocks; the Portlock collection of rocks, which is a topical series, made during the Ordnance Geological Survey of part of the north of Ireland.

The Palæontological collections consist, first, of the fossils collected under the direction of the late General Portlock; secondly, of those collected by the officers of the Irish branch of the Geological Survey; and, thirdly, of duplicates of British fossils from the Museum of Practical Geology in Jermyn-street.

The typical collections of minerals and rocks are not only intended to illustrate the lectures on geology and mineralogy given at the Museum, but are also indispensable to the officers of the Geological Survey, and serve to test the correctness of their work, and of their identifications of the rocks found in different parts of Ireland, compared with those found in Great Britain, and in other parts of the world. In any case, therefore, they should remain in charge of the local director, and be transferred along with the Palæontological collections to whatever buildings would be allocated to the Geological Survey collections, should the suggested suppression of the Museum of Irish Industry be carried out.

1309. The Palæontological collection consists of about 16,000 or 17,000 named specimens of fossils arranged stratigraphically. That is the only system of classification of use to the working geologist, or of direct practical utility to the 1933. miner and engineer. The fossils and rocks collected during the progress of the survey constitute the most important data for the construction of the maps, and 2077. are consequently indispensable to the officers of the Survey in carrying on their work. If these collections were now disturbed, the publication of the maps 2086. and reports of the Survey would be greatly delayed. Even if the Survey were completed the Palæontological and Rock collections ought never to be dispersed 2096. or amalgamated with other collections, because they are, as it were, the proofs of the accuracy of the published maps; they should always be kept separate and readily accessible, so as to enable corrections to be made as the science progresses.

1318. The Technological collections consist of the following, exclusive of the minerals above mentioned:—

Buildings.

Application of rocks to the purposes of building and decoration; among these may be specially noticed:

Building stones of Ireland collected by the corps of Royal Engineers and by the County Surveyors.

A collection

A collection of Irish marbles which has been of great service in directing attention to the value of those rocks as decorative materials.

A collection of Irish and British specimens illustrative of the raw materials of plasters, stuccos, cements, &c.

Mining and metallurgical collections, inclusive of fuel.

A nearly complete collection of Irish coals, lignite and peat, collected in part by Dr. Sullivan, and in part by the officers of the Geological Survey.

A collection of specimens of British coals used for the manufacture of gas in Ireland, and for the manufacture of iron in some of the chief seats of that manufacture in Great Britain, and at Liege, in Belgium.

A very good collection illustrative of lead and copper lodes, the products of the dressing and smelting of the ores. This collection, which was formed principally by the Director of the Museum, the Professor of Chemistry, and the officers of the Geological Survey, is mainly Irish. Some valuable specimens, illustrative of peculiarities of certain lead lodes, were contributed by Professor Warrington Smythe.

A collection of Irish iron ores, and samples of pig iron.

Specimens of British, Belgian, and Swedish iron ores.

Several series of specimens illustrative of the manufacture of pig and bar iron in the chief British centres of iron smelting, and in the district of Liege, in Belgium.

A very complete illustration of the manufacture of British blister and cast steel, and illustrations of Austrian natural steel.

Metallic manufactures.

Ceramic and glass manufactures. Among these may be remarked :—

The nucleus of a historical collection of pottery and porcelain, illustrative of the varieties of material, form, and decoration of fictile ware both ancient and modern.

A very complete collection of the materials of British earthenware, and illustrations of the products used and processes employed in its manufacture.

There are many other collections, such as those of woody fibres, barks for dyeing, hair and wool, chemical products, models, marine products, &c.

The palæontological and rock collections are in charge of the Local Director and officers of the Geological Survey, by whom the arrangement and labelling of the specimens are exclusively conducted. The mineral and technological collections are under the direction of Sir Robert Kane, and in the immediate charge of the Curator of the Museum, Mr. Gages, by whom the arrangement and labelling are done. 1296. 1933. 2108.

The most complete system of descriptive labelling perhaps ever carried out in any museum was commenced for the technological collections before this system was recommended by Parliament, the general labels of a series often including, where necessary, summary descriptions of the processes. The collection of labels belonging to each series of specimens where sufficiently complete, form, as it were, a short treatise on the manufacture which the specimens illustrate. An analogous system of labelling has been adopted for the mineral collections by the Curator, Mr. Gages, and for the rock collections by Mr. Jukes; the labels of the latter form a glossary of geological terms, attached to carefully selected illustrative specimens. There is consequently complete harmony in the arrangements and labelling of all the different collections comprising the Museum. 1321. 3222.

The mineral collections consist chiefly of purchases, with the exception of the Portlock collection of Irish minerals, and a few donations. The typical rock collection has been made chiefly by the Local Director of the Geological Survey. The collection of igneous and metamorphic rocks of Europe was purchased from the funds of the Museum for the purpose of comparing the foreign with the British nomenclature of those rocks. The three sources of the large palæonto-

logical collections have been already pointed out; in addition, a few large fossils of reptiles, and fish have been purchased from the Museum funds.

A technological museum must not be confounded with an exhibition of manufactures. The object of the former is to illustrate the physical, chemical, and biological properties of all the substances employed in industry, and the physical and chemical phenomena which are presented by the processes of manufacture to which they are submitted. The objects made, except in so far as they illustrate those phenomena, are of no importance in a strictly scientific technological collection. An exhibition of manufactures, on the contrary, has to deal almost exclusively with the objects made, the processes employed coming only incidentally within its scope, from an economic point of view, and not at all as illustrations of scientific principles. This important distinction should be borne in mind in estimating the extent of the collections which would be required to form a sufficiently useful technological museum. To judge by the relative space occupied by some of the collections which are more or less complete, the space at present devoted to the technological collections, appears to be quite sufficient for full development.

3217. From the very nature of a technological museum, no really effective collections for teaching purposes can be formed by donation in the ordinary sense, while many valuable additions may be made in this way to a large general museum of natural history, or of antiquities, casual donations would only serve to break the unity, not only of a technological museum, but of all small museums intended to be used as illustrations of lectures. Indeed, the very idea of an educational museum, excludes casual donations. But although most of the technological collections of the Museum of Irish Industry have been paid for, they may still be regarded as donations, because the manufacturers prepared the specimens according to lists supplied, and merely charged the expenses out of pocket. It is important to distinguish this class of donations from the ordinary casual donations by which many museums are formed. The fact that the greater part of the collections of the Museum of Irish Industry were collected by the officers of the Museum and of the Geological Survey, or purchased according to a definite plan, and not formed by accidental accretions, renders them of great value for the special object for which the Museum was established.

2122. It will be seen from the foregoing account of the technological collections, that a large part of them are illustrative of the practical uses of minerals and rocks, and could not, therefore, be separated from the collections of the Geological Survey, without diminishing or altogether destroying the practical utility of the latter. The processes of bleaching, dyeing, calico printing, tanning, steeping of flax and hemp, manufacture of caoutchouc and gutta percha, starch, sugar, soap, &c., are purely chemical. The whole of the vegetable and animal collections of the Museum are but illustrations of those processes, and are consequently more within the domain of the Professor of Chemistry than of the Professors of Botany and Zoology; no possible advantage could, therefore, be gained by adding those special collections to the biological collections of a large museum. On the contrary, it would be a great mistake to attempt to show the technical uses of things in a great general museum of natural history, as it would break the unity of plan, and interfere with the specific objects of the collections.

In the letter from the Board of Trade to the Treasury, dated 6th April 1854, the special objects of the Museum of Irish Industry were thus defined:—

"My Lords recommend that the limits of the Museum of Irish Industry "should be determined by directing that its collections shall in future be con- "fined to the illustrations required by a technological museum, having reference "to the Industrial Arts, and to such collections as may arise during the progress "of the Geological Survey with which it is connected."

1430. If we except the Portlock collection of the Irish fauna and flora, which
1431. has been only temporarily placed in the Museum of Irish Industry, and which was always meant to be, and should be, transferred to the Museum of the Royal Dublin Society when in a condition to receive it, the collections of the Museum of Irish Industry are strictly conformable to the limitation just stated.

1322. There is not the slightest ground for stating that the collections of the
1971. Museum of Irish Industry and of the Royal Dublin Society are similar. The transfer of those of the former to the latter place would be a great scientific blunder,

der, at the same time that it would be a positive injury to the Geological Survey. The recommendation that the Museum should be separate from the School of Science is also founded upon a mistake as to the nature and objects of the collections which your Committee repeat have two distinct objects, namely, for the use of the officers of the survey, and the illustration of the lectures of the professors. These primary objects do not preclude the use of such collections by the general public; and it appears that their use in this way has been attended with advantage. 1945. 3299. *Vide* Commission, 1862. 1319. 3208.

II. *Chemical Department.*

When Sir R. Kane was appointed Director of the Museum, the duties of Chemist devolved upon the assistant chemist, who was subsequently made Chemist. The duties of this officer, and of the Assistant Chemist afterwards appointed, were: 1st, to perform whatever chemical work was required during the progress of the Geological Survey; 2d, to make any analyses sent through the Director from public Boards; 3d, to carry out any special chemical investigations which the Director may consider useful, or which may be directly ordered by the Government; 4th, to make the analyses required for the agrological maps which the Director contemplated to publish for each county. The Chemist and Assistant Chemist received no remuneration for their services, whether the investigation was ordered by Government or by public Boards, beyond their official salaries. When the present Professor of Chemistry, Dr. Sullivan, resigned the office of Chemist in 1856, Mr. Galloway was appointed nominally to perform the same duties as the former officer, and also to conduct the classes of practical chemistry, which had been voluntarily established by Dr. Sullivan, but the teaching of which was now made part of the official duties of the Chemist. The Assistant Chemist, Mr. Gages, who was also Curator, was soon after relieved of his duties as Assistant Chemist, and he ultimately resigned that office. No successor was officially appointed to succeed him, but a sum of 100*l.* per annum of the contingent expenses has been allowed to be allocated to pay an assistant chemist. Mr. Galloway considers that that sum should be taken out of "incidents," and be placed on the regular estimate of the establishment. The present Chemist does not perform any of the duties of the former Chemist and Assistant Chemist. About three years ago Mr. Cole, Secretary of the Department of Science and Art, relieved him of those duties, and told him that henceforth the Government would only require of him to teach practical chemistry. There is consequently no longer any one whose specific duty it is to make analyses, or give chemical aid to the officers of the Geological Survey. The construction of the agrological maps has been wholly given up, although the French Government has actively promoted the preparation of such maps since the Irish were projected; and already the maps of several departments have been published. It is to be regretted that this important work has been given up; perhaps by a reorganization of this department it may be possible to resume it, as well as to afford aid to the Geological Survey in the analyses of minerals, rocks, &c. 2259. 3150. 3156. 3158. 3152. 3620. 2321 to 2327. 3154.

III. *Library.*

The Library of the Museum of Irish Industry has been formed by the purchase of books required by the professors and officers, and may be considered to be, also, the Library of the Geological Survey, as all books required by the Local Director, as Professor of Geology, are purchased. Though on a more limited scale, it has the same character as the library at Jermyn-street. Students are allowed to read there during the day; and it has also been opened to them during the evening, for a part of the year. Any person making application to the Director, or introduced by the professors and officers, has always been allowed to read there. There is no specific grant for this library, the cost of the books being defrayed out of the grant for the purchase of specimens. As a good working library is of the greatest advantage to a school of applied science, it may be advisable to make a separate grant for it, and, as at Jermyn-street, to place the library under the Curator, there being at present no Librarian. 1295. 1433.

IV. *School of Science applied to Mining and the Arts.*

Although the official letter of Lord Lincoln, founding the two Museums of London and Dublin, makes no mention of lectures, or a system of instruction, yet it is plain that such a system was intended to be introduced when the museums were completed, from the fact of lecture theatres forming part of their original plan. This opinion is fully corroborated by a passage in the inaugural discourse of Sir H. T. De la Beche, at the opening of the School of Mines in Jermyn street, on the 6th of November 1851, where he says:—"That this "establishment should be the means of affording instruction in a particular "direction. An instruction tending more especially to illustrate the application "of geology, and of its associated sciences to the useful purposes of life was "early decided. In 1839, four years after the first collections were made for "the Museum of Practical Geology, the sanction of the Treasury was given to "lectures having that application for their object. The system of instruction "we commence this day is, therefore, not founded on any new view, 12 years "having elapsed since lectures of a similar general character were authorized. "That these lectures have not been given has arisen from the want of a proper "theatre in which to deliver them, and from the absence of other appliances
p. 3. "not, until now, at our command." This passage applies equally to the
1399. 1332. 1396. Museum of Irish Industry, which though it may have formed no part of Sir H. De la Beche's original plan in 1835 or 1839, was yet incorporated into it when
1454. that plan was extended to Ireland in 1845. We have also independent evidence in the statement of Sir R. Kane, that Lord Lincoln looked upon the Chemical Department of the Museum of Irish Industry as the basis of a
1926. National School of Chemistry. The Evidence of Mr. Jukes, and of Dr. Sullivan,
3487. also show that it was always intended to establish lectures at the Museum of Irish Industry.

No arrangement had been made as to the number of professors, or the system of instruction to be adopted in the Museum of Irish Industry, until after the completion of its theatre in 1854, when the duty of making those arrangements devolved on Dr. Lyon Playfair, then the Secretary for Science of the newly formed Department of Science and Art, under which all the Government scientific institutions were about being placed.

Dr. Lyon Playfair communicated to the Royal Dublin Society a Minute of the Board of Trade, then governing the Department of Science and Art, dated 11th April 1854, defining the limits of the Museum of Irish Industry, and the Royal Dublin Society respectively, as to collections, and informing the society, that it was proposed to relieve it of the superintendence of its educational staff, in order that the latter may be made available to the public for instruction, by illustrating and explaining the collections of the two separate museums, At that time the Royal Dublin Society had four professorships, viz., physics, chemistry, mineralogy, and botany; with reference to two of these chairs it is said in the Minute, "In consideration, however, of the advanced period of life, and "of the long and able services of the present Professors of Chemistry and "Mineralogy, my Lords do not propose to ask them to undertake increased "duties, which they could not have contemplated in accepting their present "positions; and they will, therefore, make arrangements not to interfere with "their existing duties or salaries, although they may deem it requisite to appoint "Lecturers on Chemistry and Geology to the Museum of Irish Industry, for the "purpose of carrying into effect the general scheme of industrial education "entrusted to this Board. There must, however, be a distinct understanding "that, when the amount of either salary is again placed at the disposal of the "Society, it will in future be devoted to the furtherance of the museums, "garden, or library, and not to the remuneration of a new professor."

The Chairs of Chemistry and Geology here spoken of were established in connection with the Museum of Irish Industry, so that only two professorships, viz., of physics and botany, were, in reality, transferred from the Royal Dublin Society: and these alone could be said to be common to the two institutions. It was understood at the time that the arrangement respecting the Professors of Chemistry and Mineralogy to the Royal Dublin Society was intended merely as a mode of superannuating them; for the Government had no other means of adequately doing so. The Professors of Chemistry and Geology appointed to the

the Museum of Irish Industry were, in reality, the successors of the superannuated professors of the Royal Dublin Society. The fact of those new professors being appointed "Lecturers to the Museum of Irish Industry" clearly shows that the Government intended at that time to sever, as occasion offered, all connection between the educational staff and the Royal Dublin Society.

On the receipt of the Minute of 11th of April 1854, the Council of the Royal Dublin Society appointed a sub-committee (24th April 1854) to prepare a report to the Society, recommending a deputation to be appointed to represent to the Lord Lieutenant the importance of not depriving the Society of its character as an institution for the promotion of industrial education and the practical sciences and arts. This report was presented to the Society at a meeting held 27th April 1854; it protested against the existence of the Museum of Irish Industry. "The Council," it said, "are fully sensible that the continuance of two such institutions is unnecessary and inexpedient, and they "submit that it would be more consistent with a just regard to the rights "and position of this Society, and more conducive to public utility, that the "objects of the two institutions should be carried out by the Royal Dublin "Society." The appointment of professors by the Board of Trade, and the division of their duties between the Royal Dublin Society and the Museum of Irish Industry were also strongly objected to. It was considered that this division of duties would not be advantageous to either institution, on the ground that the duties of professors are not "confined to imparting instruction by lectures alone, but by various other modes; by practical experiments, by references from members, and by reading papers at the public meetings." The deputation to the Lord Lieutenant to ask his Excellency's co-operation was appointed, and it was likewise referred to Council to prepare an answer to the Minute of the Board of Trade. A special meeting of the Society was convened for 9th May 1854, to appoint a deputation to wait upon the Board of Trade in accordance with the desire of the President of that Board, then the Right Hon. E. Cardwell. At that meeting the answer to the Minute of the 11th of April was ordered to be inserted in the minutes. In this answer the Society claimed to have been from its institution, in 1739, educational, and protested against the professors being placed under the direct responsibility of the Board of Trade alone, and to their duties being confined to lecturing. 2990. 2992.

At a meeting, held on the 29th of May, the deputation appointed to wait on Mr. Cardwell, President of the Board of Trade, reported that there were two points upon which the Government would not recede, namely:— 2957.

1. The maintenance of the Museum of Irish Industry as a separate Government institution; and,
2. Their intention of not supporting a double staff of professors.

The Society had instructed the deputation to state that it would not recede on one point, namely, the entire abandonment of its educational staff. Mr. Cardwell proposed, as a compromise, that a committee be entrusted with the general arrangement of all lectures common to the two institutions; and also, of the provincial lectures, leaving to the Museum the organization of the regular course of industrial education which it was proposed to establish. This committee was to consist of eight members, four to be elected by the Royal Dublin Society, and four to be appointed by the Crown; the latter four to be also members of the Royal Dublin Society, or if not already members to be admitted as such without ballot, on their appointment by the Crown.

The new professors appointed to the Museum of Irish Industry, and the two transferred from the Royal Dublin Society, met under the presidence of the Director of the Museum of Irish Industry, and drew up a provisional scheme of lectures. This scheme embraced two distinct kinds of lectures: first, systematic lectures, for which a fee was to be charged, which were to be delivered in the Museum of Irish Industry, and in regard to which alone the professors were under the direction of the Director of the Museum of Irish Industry; and, secondly, popular courses, one of which was to be delivered in the afternoon in the theatre of the Royal Dublin Society, and a second course in the evening in the theatre of the Museum of Irish Industry. So far as regarded the popular courses the professors were governed by the joint Committee, each professor communicating independently respecting his own lectures with the Committee. There seems to have been no obligation as to the number of systematic lectures 2193. 3517. 3532.

which each professor was to deliver, because the scheme was provisional; as to the popular evening lectures, they were distinctly understood to be voluntary and tentative. Even as regards the popular lectures in the Royal Dublin Society, there seems to have been no obligation whatever respecting them imposed upon the two new professors; and therefore, so far as those gentlemen are concerned, the lectures given by them in the theatre of the Royal Dublin Society must be considered as voluntary labour, and a proof of their anxiety to give the arrangement a fair trial.

The Professor of Physics, having to deliver the greater part of his lectures in the Museum of Irish Industry, was obliged at first to borrow the apparatus of the Royal Dublin Society. He has, however, gradually purchased a collection
1369. of newer and better apparatus with his share of the annual grant voted for lecture, outfit, and expenses, so that the necessity for carrying the apparatus from one institution to the other has somewhat diminished in his case. As the Professor of Chemistry of the Royal Dublin Society continued to lecture after the new arrangement, and his son has been appointed his successor, though
3175, 3176. under the name of Professor of Agricultural Chemistry, the Professor of Chemistry to the Museum could not use the apparatus of the Society in the lectures which he gives in the Society's theatre without deranging and interfering with the arrangements of the Society's professor. He is, therefore, obliged to have his delicate and fragile apparatus carried to the theatre of the Royal Dublin Society every time he lectures there. The Professors of Geology, and of Botany, and Zoology are subjected to a like inconvenience, though in a less degree, as they have generally to carry only diagrams. It thus appears that the Professors of the Department of Science and Art are subjected in the capital of Ireland to the same inconveniences as if they had been sent to lecture in some remote country town.

The lectures delivered at the Royal Dublin Society, are of less practical utility than they otherwise would be to students who are not members, on account of the privileges which members and their families reserve to them-
3174. selves of occupying the portion of the theatre close to the lecture table. This must always tend to prevent real students attending there, no matter what may be the character of the lectures. They cannot conveniently examine specimens, study the disposition of apparatus, or ask explanations of the professors. In consequence of the number of public lectures which each professor has to
1346. give, the systematic, or strictly educational courses for students are reduced to 30 lectures. In order to save time by not having to go over the same subject twice, or repeat the same experiments, an attempt was made to dovetail the free courses delivered in the theatre of the Royal Dublin Society with the day
1350. courses given at the Museum of Irish Industry. It was believed that by giving
1352, &c. the introductory part, which could be made popular at the former institution,
1370. the teaching of the elements of science to the students might be combined
1958. with popular instruction to a larger class, at the same time that the professors
1959, &c. would have more time to devote to the higher and more abstract parts of their
1959–1960. courses subsequently in the Museum of Irish Industry. Experience has shown,
3184. however, that, with few exceptions, the persons who attend the lectures at the Museum of Irish Industry do not attend at those given at the Royal Dublin
3172, &c. Society. No advantage can possibly be gained by subdividing a course of
3189. lectures, and delivering a part of it in one institution to one set of persons,
3195. and another in a different place, and to a different class, and, in some cases, as appears by the annual programme, after an interval of several months.
3517. Such a system, which necessarily diminishes the efficiency of the instruction,
3642. while it confers no advantage upon the public, and entails much additional and unnecessary labour upon the professors, is an anomaly which should not be
1353 and 1354. allowed to continue. The evening lectures given at the Museum of Irish In-
1956–1958. dustry, being much more educational than the popular lectures of the Royal
3348. Dublin Society, and being attended by many artizans, have been undoubtedly more useful. These lectures have hitherto been "free to the public," though there seems no reason why Dublin alone should receive gratuitous lectures, while the provincial towns are obliged to pay for them.

In addition to the voluntary popular lectures, the professors have given systematic courses of 30 lectures, which are sometimes extended by a few addi-
3494. tional lectures, when the subject requires it. The lectures have all been given at four o'clock in the afternoon; only one course being given at a time, each lecturer

lecturer giving five lectures a-week until his course was completed. A fee of only 3 *s.* 6 *d.* was charged for each course. This system, which is provisional, and which only brings the student for one hour each afternoon to the museum, is not calculated to create a real class of students. There seems no reason why the lectures should not be given at other hours, as well as at four o'clock, so that two or even three courses might be proceeded with on the same days.

If all gratuitous systematic lectures supported by the State be abolished, the number of persons attending the lectures might be smaller than at present, and consequently the relative merits of the two systems of lectures, gratuitous and paid, could not be estimated by a comparison of the numbers attending. The advantages of higher education, especially in physical science, should not be estimated alone by the number of persons who have taken advantage of lectures and museums, for the number of persons who can make real practical use of them must always be necessarily small. The benefits which the multitudes derive from attending lectures and visiting museums, though valuable, and worthy of being encouraged, is secondary to their higher uses to really scientific students. 1323. 1603. 1967, &c.

The systematic lectures have always been followed by an examination open to all those who attended, and the classification of the students in the order of merit, prizes having been given to the first three, and certificates of competency to the remainder of those who passed the examination. At one time, besides the special prizes awarded in this way for each subject, prizes and certificates were offered to students who passed an examination in all the subjects taught. These certificates might be looked upon as diplomas of proficiency in experimental and natural science. In consequence of the provisional character of the whole system of teaching, which was not conducive to the formation of a regular class of students, these general examinations have not been continued. Objections have been made by Mr. Galloway to the system of prizes. He states, that as the fees for lectures are small, and the money prizes considerable, many young men are beginning to look rather to the prizes as the main object, than to permanent instruction. Students come badly prepared, and the professors have to commence with the rudiments of science. He would, therefore, institute a non-compulsory preliminary examination, and give to the student who passed the best examination a reward in money, provided that he continued to study in the institution during the year practical and physical chemistry, and natural philosophy during the year. 3644. 84.

From the Eleventh Report for 1864 of the Science and Art Department, it is satisfactory to notice that during the past year there has been a marked increase in the number of students attending the systematic course of the Museum.

Royal Zoological Society.

The Zoological Society was founded in the year 1830, and a portion of ground was assigned to it in the Phœnix Park by the Lord Lieutenant. In 1837, Her Majesty, considering the constitution and proceedings of the Society to be deserving of encouragement, was graciously pleased to become the Patroness of it, and the title of Royal was officially conferred. 294. 295.

The Society at present consists of 395 members; of these 233 are annual members. The annual subscription is 1 *l.* There is also an entrance fee of 1 *l.*, from which members of the Royal Dublin Society are exempt: 130 are life subscribers on a composition of 10 *l.* if not members of the Royal Dublin Society; if members of the Royal Dublin Society, the composition is 7 *l.*; and 15 are garden subscribers, who enter their names in a book at the gate, and pay 1 *l.* annually. They are not entitled to take any part in the proceedings of the Society. 298.

There is no ballot; admission to the Society is obtained by the candidate being proposed and seconded by members of Council at Council meetings.

The governing body of the Society is composed of a President, five Vice-Presidents, two Honorary Secretaries, a Treasurer, and Council of 15, elected annually. The Council meet every Saturday morning at the Gardens at Nine o'clock for transaction of business.

The terms of admission to these gardens are extremely liberal; on week days the charge for admission to the public is 6 *d.*, but on holidays, Sundays after two o'clock, and after five o'clock, p. m., in summer evenings, admission
347. is only 1 *d.* This liberality has been appreciated by the public; not more than one instance of mischief has occurred since the gardens have been fully opened, a period of 20 years, and that act of mischief was not done on a Sunday, or at a time when people were admitted at the 1 *d.* rate, but at a time of the day when the admission was 6 *d.* In addition to this, children of all the charity
303. schools of Dublin are allowed free admission, provided they are accompanied by persons to take charge of them. In a financial point of view this liberality has been successful.

Course of lectures on the several branches of Zoology and Natural History have been delivered at various times, and it is proposed to hold in the coming and succeeding year more meetings of a scientific character.

For the year ending May 1864, the total receipts of the Society were, 1,988 *l.* 4 *s* 3 *d.*, viz.: 399 *l.* 17 *s.* 8 *d.* by penny admissions; 360 *l.* 16 *s.* 6 *d.* by sixpenny admissions; 217 *l.* by annual subscribers; from other sources, viz., Government Grant, sale of animals, &c., 1,012 *l.* 0 *s.* 1 *d.*

335. The expenses amounted to 374 *l.* 11 *s.* 9 *d.* for salaries and wages; for keep and purchase of animals, buildings, repairs, &c., 1,674 *l.* 11 *s.* 7 ½ *d.*

309. In the year 1854, the Council memoralized the Lord Lieutenant for Government assistance, and a Parliamentary Grant of 500 *l.* was sanctioned. This sum is placed on the Estimates for the Royal Dublin Society, and is paid through its agency. In return for this agency, the members of the Royal Dublin Society become annual members of the Royal Zoological Society, without payment of an admission fee, or life members, by payment of 7 *l.*, instead of 10 *l.* It appears from the evidence that this privilege has not been taken advantage of to any amount.

As this grant imposes no trouble, expense, or responsibility, on the Royal Dublin Society, Your Committee are at a loss to understand why such privileges should be conferred. They are slight, no doubt, and more of the nature of a compliment than of a boon; they are not injurious to the public; still in the case of a Society so largely supported by State aid, it does not seem advisable to sanction the principle that privileges other than those of honorary membership should be accorded by it.

317. The gardens are situated on one side of a small lake in the Phœnix Park; the other side of the lake being left open and undefended, the water-fowl are exposed to constant danger from dogs and ill-disposed persons; added to this, the gardens are subjected to the incursions of deer, which cross the lake by night, and commit serious depredations on the shrubs and flower-beds. It was thus found impossible to provide for the safety of the water-fowl and the general security of the gardens; one great object of the Society, namely, the acclimatisation of animals, was also impracticable, from the constant disturbance to which the water-fowl were subjected. During the year 1863, not a single water-bird was permitted to hatch its eggs and rear its young.
352. Under these circumstances, permission was obtained from the Government to fence in the ground all round the lake; the Society has to erect this fence, and the Board of Works has required that it should be made of a particular construction, involving very great expense. The estimated cost of the fence is at least 400 *l.*, independently of the cost of erecting a bridge, laying out walks
357. planting, and the erection of an exit turnstile, and an appeal has been made to the members and the public. This appeal, although responded to by the public, had not produced the required amount. A small assistance by way of grant would enable the Society to carry into completion this important work, on which the security of the gardens and their general attractiveness so much depends. Your Committee are of opinion that this assistance would be an encouragement to the Society, and ought to be conferred.

Royal Irish Academy.

4852. The Royal Irish Academy was incorporated by Royal Charter in January 1786, for the promotion of science, polite literature, and antiquities. It has published 23 quarto volumes of Transactions, containing valuable papers under each

each of these heads; but as polite literature in the present day requires but little assistance, the attention of the Academy is devoted mainly to science and antiquities. It stands to Ireland in the same position as the Royal Society, the Royal Society of Literature, and the Royal Antiquarian Society do to England. The constitution of the Academy consists of a President, a Council of 21, and an indefinite number of ordinary members. There are also honorary members in various departments of science and literature, who are, for the most part, foreigners. The President, though elected annually, usually holds office for five years. The council of 21 is divided into three committees, each composed of seven members, for science, polite literature, and antiquities. The council is elected each year, in accordance with the Charter, but there appears to be but little fluctuation in its composition. The President and Council are the executive of the Society, having the privilege of initiating all business relating to finance and bye-laws; it rests, however, with the main body of the Academy to sanction the recommendations of the executive. 4854.

The Society is at present composed of 355 members, of whom 197 are life members, and 158 annual members.

The life composition is 20 guineas, but a member who has paid the annual subscription for 20 years may, on additional payment of six guineas, compound for the rest of his life. The annual members pay an entrance fee of five guineas, and an annual subscription of two guineas. Admission is by ballot; the minimum quorum of members balloting for the admission of candidates is 16, as fixed by the Charter, and at least three-fourths of members present must vote for the candidate. There is no absolute standard for admission to this Academy, but it is generally understood that persons seeking to become members should be persons of scientific and literary acquirements. The very fact of being on its roll is regarded as a kind of literary or scientific degree. 4856. 4859.

The income of the Academy is small, averaging for the last 10 years about 550 *l.*; to this should be added an annual Parliamentary grant of 500 *l.* since 1852. Special grants have been given from time to time by Government in aid of subscriptions among members. The income of the Society is partly derived from a bequest left by Timothy Cunningham, merchant in London, to be invested in public securities, and the interest of it to be given in premiums according to the will and bye-laws of the Royal Irish Academy. These premiums have been given in the form of gold medals once in three years by each of the Committees of Science, Polite Literature, and Antiquities, for contributions of distinguished merit in each department. Another source of income is derived from Academy Stock, which at present amounts to about 1,260 *l.*; this stock represents a portion of the life compositions of members which have been funded. 4877. 5374.

At the present time it should have amounted to a sum of 3,344 *l.* Unfortunately, however, some years ago, the expenditure of the Society exceeded its income, and both the Cunningham Fund and the Academy Stock were trenched upon to make good the deficiency. The Cunningham Fund has been restored to its proper amount, and a sum, averaging 110 *l.*, for the last 10 years has been annually invested by the treasurer to replace the Life Composition Fund so unfortunately invaded. The evidence of the President sufficiently indicates the expediency of replacing the capital so expended, and of avoiding for the future any expenditure beyond income. 4885. 4882.

The average expenditure of the Society for the last 10 years has been 1,058 *l.*; of this, 503 *l.* are applied to establishment charges; to the purchase of Cunningham Stock, 51 *l.* 19 *s.* 6 *d.*; purchase of Academy Stock, 110 *l.* 5 *s.*, Cunningham medals, 30 *l.* We may take this opportunity of remarking that it would be well for the Academy to consider whether the proceeds of the Cunningham Fund might not be made, in some manner, better calculated to promote the objects of the Society, rather than by the occasional award of medals. It will be apparent that the balance left for the purchase of books and antiquities, for printing and stationery, and for the special purposes of the Academy, is but small indeed.

The narrowness of the income of the Society is felt in every department; constant appeals have to be made to the generosity of members, and from the evidence received, it is clear that these appeals have been most liberally responded to. The collection of antiquities belonging to the late Dean Dawson 4927. 4927.

was purchased by subscription for the sum of 1,067 *l.*; the Tara Torques for 190 *l.*
Dean Graves. Towards the purchase of Sir W. Betham's Irish manuscripts, 600 *l.* was raised
4927. from members; for the Hodges & Smith Irish manuscripts, 723 *l.* The effect of
5049. these constant subscriptions has been most injurious, as the burthen has fallen mainly on the same persons, who have repeatedly come forward, and who are not always in possession of large means; and the apprehension of these repeated calls has had the effect of deterring many persons from becoming candidates for admission. The knowledge, moreover, that the funds available for printing are so small prevents persons from coming forward to read papers. Another effect prejudicial to the Society from the narrow limits of the available balance, is the rivalry between the two branches of the Academy, the scientific and the antiquarian, as to the application of that balance. Without altogether accepting the statement of the Rev. Mr. Haughton, before the Committee of 1862, that the antagonism betwen the two sections is "disastrous," still it is perfectly clear that serious differences have arisen, and may again arise, most prejudicial to the harmony and efficiency of this important body. To remedy these differences it has been proposed to divide the available balance between the two departments.
4922. This suggestion your Committee cannot entertain. It would be extremely difficult to decide how it should be divided; it might lead to the severance of the body into two distinct academies, by which neither science nor antiquities would gain. The association of persons skilled in the different
5418. 4922. branches of science, with those who pursue antiquarian studies, has been of benefit to both. It is more than doubtful if the same liberality on the part of the State which might be obtained for one institution, so popular from its special collections and so influential from the success of its literary efforts, would be equally available for two, weakened as each must be by separation.

The Academy is furnished by the Government with a good house, which is kept in repair by the Board of Works. In it is a fine library in which the
4969. 5007. meetings of the Academy take place. This library contains a considerable number of Irish manuscripts of great interest and importance; a large selection from collections which were made by the Ordnance Survey Department, when it was in contemplation to publish in connection with the Ordnance Survey a topographical memoir of Ireland; a tolerably good selection of the transactions of learned societies and scientific journals, and also a growing collection of works printed in Ireland, or relating to that country. In addition to, but apart from, the library proper, there is also the library of Thomas Moore, the poet,
5017. given to the Academy by his widow. Among the manuscripts are some of great
5012. antiquity and importance; one of them is the book of Ballymote, the value of which may be indicated by the fact that it was sold in the year 1522, for 140 milch cows; another manuscript was given in ransom for the chief of the O'Dogherties and the son of O'Donnell's chief poet. To recover this manuscript and another, O'Donnell laid siege to Sligo in 1470. Another manuscript, called the "Book of Lecan," is 400 years old, and was carried by James the Second, when driven out of Ireland, to Paris. It was
5016. deposited in the College of the Lombards till 1787. The Irish Academy, at that time just founded, sent over to the College of the Lombards, asking permission to transcribe it, and the College of the Lombards, in the most liberal manner, presented it to the Academy. There is also an autograph copy of the "Annals of the Four Masters," a copy of the Gospels, supposed to be of the time of St. Patrick, and the Leabhar Breac or Speckled Book of the M'Egans, of the date 1330. These and other manuscripts contain a large amount of matter valuable to the historian and the philologist; and it is advisable that the Academy should be assisted to reproduce by means of photo-zincography many of these manuscripts and other documents, some of which are in a precarious state.

The selections made from the collections of the Ordnance Survey are papers of great importance, illustrating, as they do, the topography, history, customs and
4967. traditions of Ireland. One volume, derived from these sources, and referring to the Parish of Templemore, which includes the City of Londonderry, was published some years ago. This specimen showed that the completion of the work would have been attended with national benefit. The Government was, however, deterred by the expense from prosecuting the design. A great deal of
4989. the expense necessary for the publication of the remaining volume has already been undergone, and it is much to be lamented that a work of such extreme interest and value should not be finally completed. If it should be considered

advisable

advisable to complete a work, "which would have certainly been completed in France, had such adequate materials for the accomplishment of it existed in that country," no time should be lost. Government has recognized the importance of promoting the scientific study of the ancient language and records of Ireland, but it has been found that the institution of professorships of the Irish language in the provincial colleges, where they have neither a class to instruct nor the appliances in libraries and collections for study and research, is not a good mode of promoting this object. It is necessary to procure persons well versed in the Irish language to collect topographical information; and as that language is dying out, the difficulty of obtaining the services of Irish scholars becomes greater from year to year. The Royal Irish Academy, were an adequate annual grant placed at its disposal for this purpose, would be well qualified to attain the end in view, by the employment of Irish scholars of high character, in the copying, translating, and editing of works of antiquarian and historic interest connected with the country. It will be seen from this slight sketch of the Library that it has the specialty of being chiefly selected to illustrate the history and physical condition of Ireland. Your Committee express their strong approval of the maintenance of this object in all future additions to the library. Dean Graves.

The Museum numbers at present about 9,500 specimens. It is the most important Celtic collection in the world. The Academy is much indebted to Lord Farnham for his liberal contributions to the Museum, and from the Board of Works, Shannon Commissioners, and Drainage Commissioners, many specimens of value have been received. These specimens are specially interesting, because of the circumstances under which they were found being known, with details which lend additional interest to them. There is a collection of casts of Scandinavian antiquities from the Museum at Copenhagen, presented by the King of Denmark; and also casts illustrative of Irish antiquities. 3317.

A few years since, at the instance of Lord Talbot de Malahide, regulations were made by the Government with respect to treasure-trove. If articles of silver or gold be now discovered, the finder hands them over to the police, who sends them up to Dublin. They are valued by the Committee of Antiquities in the Royal Irish Academy, and the paymaster of constabulary pays the finder a value, somewhat exceeding the intrinsic value of the metal. It has been calculated that within the period which has elapsed since the foundation of the Academy the intrinsic value of the ancient gold ornaments cut up and melted has exceeded the sum of 20,000 *l.* The Academy has published a circular, to make the new arrangements generally known in Ireland, and the people are beginning to understand that it is not for their interest to break up and melt the objects of gold and silver which they find. The sum of 100 *l.* per annum is the amount of treasure-trove grant, but though many valuable gold articles have been already procured through means of it, the full sum has not been expended. 4936. 5306. 4934.

In connection with the museum is the learned and admirable Catalogue. It was set on foot in 1847, and executed gratuitously by Sir William Wilde. It is illustrated with 630 woodcuts carefully drawn. The cost of this work, and of the registration of the articles described in it, was defrayed partly by the Academy, partly by subscription among its members, and partly by Government grants. This catalogue has not only made known to the world the riches of the museum, but it has stimulated attention to Irish archæology. All articles of stone, earth, wood, bronze and gold, which were in the museum previous to 1857, have been catalogued, described, and illustrated. Articles of silver and of iron, ecclesiastical remains and acquisitions since 1857, are still uncatalogued. Most of the letterpress of the unfinished portion of the catalogue is completed. It is unfortunately at a stand-still for want of funds. About 400 *l.* or 500 *l.* is required, and from its popularity, it is expected that if carried out, it would add to the income of the Academy. 5327. 5332.

From the same deficiency of means, the only assistance which the Academy is able to afford to persons engaged in making original researches is to give them an opportunity for publishing the results of their investigations; that is done in two ways; first, by having papers read before the Academy, and inviting discussion upon them; and, secondly, by printing these papers. On one occasion the Academy allocated funds for the institution of a series of tidal and meteorological observations round the coast of Ireland. These observations were continued at 12 different stations for a period varying from 5420.

12 to 16 months, and the result was, that a body of observations on the tides, of the highest importance, was obtained; Ireland being a peculiarly interesting country as regards meteorological and tidal observations, having Atlantic weather and Ocean tides on one side, and Channel weather and Channel tides on the other.

5454. The Rev. Mr. Jellett, who was examined as the representative of the Science Department of the Academy, stated that there was great difficulty in illustrating the papers that are published, from the expense attending such illustration. This discourages the bringing forward valuable papers on natural science. The same witness recommended, if circumstances permitted, that the Academy should give assistance to persons engaged in valuable scientific researches which involve considerable expense.

The requirements of the different departments of the Academy, to enable it to carry on its work with efficiency, are as follows, according to the estimate handed in by the President:—

	£.
1. For the preparation of Scientific Reports on the Irish Tides, Terrestrial Magnetism, Meteorology, &c., including cost of instruments, and grants to observers	200
2. Salary to an Irish Scribe, including cataloguing and printing Irish manuscripts - - - - - -	200
3. Salary to a Museum Clerk, purchase of Antiquities, cost of making Casts and Photographs, to be exchanged with other collections - - - - -	200
4. Salary to a Library Clerk, with cost of Books, and Binding - - - - - - - - - -	200
5. Printing and illustrating the Transactions and Proceedings - - - - - - - - - -	200
TOTAL AMOUNT of required increase to present Annual Grant of 500 *l.* - -	£. 1,000

Your Committee cannot conclude their notice of the Royal Irish Academy without remarking that this Society has had upon its lists, since its foundation, almost every man in Ireland distinguished in abstract science, in the sciences of experiment and observation, in literature, and in archæology. It has illustrated the history and character of its own country by works of originality and importance. It has further illustrated and awakened an interest in that history by its Museum of Irish Antiquities. The liberality of its members in contributing to these objects is deserving of remark. As a peculiarly national institution, it has no ordinary claims for support in carrying out its present work, and for encouragement in extending it.

Your Committee have also agreed to the following Resolutions, upon which they will now proceed to comment:—

Resolved,—

I. That it would be injurious to the interests of the public that the Museum of Irish Industry should be suppressed, or amalgamated with the Royal Dublin Society.

II. That whether the Museum of Irish Industry be placed on the same footing as that of Jermyn-street, or whether its functions be extended, it may be made as an independent institution of great utility to Ireland.

III. That the Museum of Irish Industry is distinct from the Royal Dublin Society, as being a public institution, supported by public funds solely for the use of the public, directed by a permanent scientific head, responsible to the Government, and administered exclusively by scientific men, selected on grounds of fitness.

That the Royal Dublin Society, founded by Royal Charter, is composed of a number of subscribing members, and is so far a private body, the members of which have some preferential privileges; it is directed by a Council, whose members are fluctuating, and have no individual responsibility, and it is administered by committees of the same nature as the Council.

IV. That

Royal Dublin Society.

IV. That the Royal Dublin Society was originally intended, according to its charter, for the encouragement of husbandry and other useful arts. Its scope was subsequently extended, and educational functions in art and science were assigned to it. There is, however, nothing now in the circumstances of Ireland which renders it expedient that the technical and scientific instruction given in that country, at the expense of the State, should be entrusted to the management of a body of private gentlemen, rather than to a public scientific institution, as in England.

V. That the Royal Dublin Society should be relieved of those educational functions for the management of which it is not specially adapted. It has been proved by unanimous testimony, that the establishment of a veterinary school would be of great importance to Ireland. This would legitimately fall within the province of the Royal Dublin Society. Their agricultural chemist should also be retained. The Royal Dublin Society having, moreover, been entrusted with funds for forming a Botanical Garden, a Museum of Natural History, and a Library, it is expedient that it should be enabled, without further loss of time, to make these several departments efficient and complete; and, also, that it should be assisted in obtaining proper facilities for its cattle shows and periodical exhibitions of manufactures. These objects would be effected by the grant of the sum of money recommended by the Report of the Commissioners of 1862, and approved of by the Secretary of the Treasury, June 1863, being placed at the disposal of the Royal Dublin Society, together with such further grants, annual or otherwise, as Parliament may judge necessary, to enable the Society to carry out its duties; certain conditions should be attached to the granting of the funds necessary to effect these objects.

Council.—Such a modification of the charter and bye-laws of the Society should be effected as shall delegate to the Council the general management of the Society, the appointment, control, and dismissal of officers, and full authority to act on its behalf.

Library.—The Resolution unanimously agreed to by the Committee on the Royal Dublin Society of 1836, "that books should not be lent out of the library," should be accepted by the Society. Admissions to read should be obtained on presentation to the librarian of a recommendation, signed by a member of the Royal Dublin Society, or at the discretion of the librarian on the recommendation of two respectable persons.

Museum.—The Museum should be opened to the public on Sundays after the hours of Divine Service.

Botanical Gardens.—The Botanical Gardens should be open to the public every day of the week free of charge, as at Kew. On two days in the week they might be closed till two o'clock for the delivery of lectures, for shifting plants, and for cleaning.

Museum of Irish Industry.

VI. That the Museum of Irish Industry should be placed on a similar footing to that of the Jermyn-street Museum, as regards its collections, professors, and lectures, or those lectures and collections might be extended to the illustration of such other industrial objects as may be sanctioned by the Government.

The museum of this institution should be opened to the public on Sundays, after the hours of Divine Service.

VII. That courses of systematic lectures entirely free are inexpedient, and that henceforth it shall be no part of the duty of any lecturer to deliver such lectures gratuitously.

It has been proved that free courses of popular lectures have been productive of good, and might be given occasionally with advantage.

VIII. That all systematic instruction followed by examination and prizes or certificates of competency should be given under the direction and control of one officer, responsible to Government for the efficiency of the system, under similar arrangements to those existing in Jermyn-street.

Provincial Lectures.

IX. That provincial lectures are calculated to be of great use in arousing and spreading a desire for scientific knowledge throughout Ireland; and for this purpose the annual grant of 500*l.* should be continued. The recommendations of the Committee of Lectures, of the 10th January 1861, in regard to the salary of the Secretary, should be carried out.

X. That the Committee disagrees with the recommendation of the Report of the Committee of 1862, on the Royal Dublin Society, &c., &c., "that advantage would be gained if all Parliamentary Grants in aid of Science and Art at Dublin were included in the estimate of the Royal Dublin Society, and were paid through its medium, inasmuch as they then would be brought under consideration in one point of view, and the Council of the Royal Dublin Society would have an opportunity of making any representations which the circumstances at the time might render proper in reference to them."

The unanimous opinion of the other scientific societies is opposed to this recommendation, as being unsupported by evidence, injurious in its effect, and not sought for by the Royal Dublin Society; and the Committee concurs in the objections urged by the Societies against this proposal.

Royal Zoological Society.

XI. That this well-managed Society contributes in a high degree to the instruction and amusement of the public. At the present time the Society is endeavouring by private subscriptions to erect a fence with the view of inclosing an additional space which is necessary for the security of the gardens. The Board of Works requires that the fence should be of peculiar construction, involving a large expense. As this Society has been the first to give what may be called almost gratuitous admission to the poorer classes, it is advisable that assistance should be granted towards the completion of this and other necessary works.

Royal Irish Academy.

XII. That the Royal Irish Academy combines the objects of the London Royal and Antiquarian Societies, and has acquired the highest reputation for the learning and activity of its researches. The Museum is the richest and most important in Europe in Celtic antiquities. The Library contains manuscripts and works of great value, illustrative of early Irish history. It has published papers scientific and antiquarian of no ordinary interest. Differences have arisen between the representatives of science and antiquities as to the distribution of the annual Parliamentary grant of 500*l.* These differences are owing to the small amount available for the pressing and absolute wants of each of these departments. Assistance is required to enlarge the Museum, to increase the staff, and to aid scientific researches. This Society has the strongest claims on the liberality of Parliament. The Museum should be open to the public on Sundays, after the hours of Divine Service.

I.—Before the establishment of the Museum of Irish Industry there was not anywhere in Ireland any collection of mineral, vegetable, and animal products, so arranged as to show any of their uses, or the processes by which they were converted from raw materials into articles of use, neither has this been done in any other museum down to the present day. The Museum of Irish Industry does this, and more, inasmuch as it also exhibits in the collections of the Geological Survey some of the scientific relations of the mineral products, rocks, fossils, minerals, and ores, more systematically, and with greater completeness, than is done in any other museum in Ireland.

If the exhibition of such collections be of utility, then the suppression of this museum would be injurious to the interests of Ireland.

That much need was felt by scientific men in Ireland for such a Museum, and a School of Practical Science in connection with it, is shown by the passages quoted from Dr. Apjohn's presidential address to the Dublin Geological Society, in 1841, in reply to question 1927.

Dr. Apjohn refers to the presidential address of Dr. Buckland to the Geological Society of London, in which he speaks of the establishment of the Museum

Museum of Economic Geology in London; and he then proceeds to say, "This "passage I have read, I can truly say, with great pleasure, though not without "emotion of a different kind. We all hail with gratitude, and with confident "anticipations of great advantage both to science and the arts, the establishment "by Her Majesty's Government of such an institution." "But it is reasonable to 1927.
"inquire why nothing of the kind has been attempted for Ireland. England is "a rich, Ireland a poor country. Is this any reason why we should not have the "benefit of a Museum of Economic Geology?" "If it be decided, and decided "wisely, that the Cornish miner may be materially benefited and improved by "resorting to the Museum and to the Laboratory of the Institution for Economic "Geology, it surely will not be denied, that those who in Ireland are engaged in "the same pursuits would derive from such sources a more than proportionate "amount of assistance. Why, then, I would ask, have we not in Ireland some "institution analogous to that recently established in London, and which, in the "opinion of the best judges, promises to ameliorate the condition and augment "the resources of the wealthiest nation in the world." He then goes on to say, "Through the means of the Geological Branch of the Ordnance Survey a most "extensive and valuable collection of rocks, minerals, and fossils, is in the "possession of the Government, and even already arranged, so that it is at this "moment fully available for purposes of instruction. Here, then, is a cabinet to "begin with precisely similar as to the manner of its acquisition to that arranged "by Mr. De la Beche, and which has been made the nucleus of the Museum of "Economic Geology, established in the department of Her Majesty's Woods and "Forests in London."

It is obvious that it never occurred to Dr. Apjohn to suppose that the Royal Dublin Society was able to supply these wants, or he would not have pointed so forcibly to the geological branch of the Ordnance Survey as the only then existing means of doing so.

The necessity of such an institution was felt by the Government of Sir 1396.
Robert Peel. In the letter of Lord Lincoln, dated 29 March 1845 (*Vide* Appendix), addressed to Sir Robert Kane, written on the subject of the foundation of the Museum of Economic Geology, is this paragraph: "The application "of such a collection as, it is hoped, may be eventually formed, to the varied "purposes of mining, of agriculture, and of the arts, will present a field for "analysis and illustration, the resources of which it will, of course, be your "chief duty to explore, and ultimately to place before the public in such an "intelligible and popular form as shall best accord with the objects of such an "institution."

In 1847, Lord Carlisle, the then Commissioner of Works, recognised, on the part of the Ministry which succeeded that of Sir Robert Peel, the value of this institution, and enlarged its scope.

In 1853, Mr. Cole was directed by Mr. Cardwell, then President of the Board of Trade, to proceed to Dublin, and inquire into the subject of scientific and artistic education. In that year Mr. Cole submitted to Mr. Cardwell a letter, in which the policy of the Science and Art Department was set forth of maintaining a scientific and industrial school of instruction in Dublin; 9.
and the Irish Executive, through Major Larcom, Under Secretary to the 5522
Lord Lieutenant, signified its entire approval of the recommendations of 5524.
Mr. Cole.

That the Irish Government, which may naturally be supposed to be that Department of State best acquainted with the wants and wishes of Ireland, remains of the same opinion, is evident from the letter of the Under Secretary, Sir Thomas Larcom, written by command of the Lord Lieutenant to the Secretary of the Treasury in 1863, in which the following paragraphs occur:—
"Those who advocated the Industrial College have continued to hope the full "design would be ultimately adopted, but the consolidation of the whole in the "Dublin Society would be a movement in the contrary direction, and would be "considered, as regards industrial instruction, a reversal of the original inten-"tion and of the policy which has been pursued for the last thirty years in "Government Education in Ireland." "His Excellency cannot but fear the "suppression of the establishment in Stephen's Green will be a public loss, and "he is unable to hold out to their Lordships any hope that such a measure will "be acceptable to the general public as soon as its full magnitude begins to be 2643.
"seen." The present Prime Minister, Lord Palmerston, as stated by Sir

Robert Peel, has also recently in Question 2643, expressed his disapprobation of this amalgamation.

Evidence in favour of the suppression or amalgamation of the Museum of Irish Industry with the Royal Dublin Society has been given solely by persons actually members of that Society, with the exception of Captain Donnelly. All other witnesses, not belonging to the Society, who have been examined on these points, have expressed the strongest disapproval of any such proceeding.

Sir R. Kane, 1319, &c. Jukes, 1950. Sullivan, 3208. 3432. 3437, &c.

II.—It appears from the statements of Sir R. Kane, of Mr. Jukes, and of Professor Sullivan, that besides the large number of persons who have visited this establishment since its completion, not a few of whom must have gained some greater knowledge of science and its applications than they previously possessed, many others have derived much valuable information from direct application to its officers. The fact of some of these officers being present on the spot, with the Museum close at hand to refer to, is an obvious advantage to the public.

Its intimate connection with the Geological Survey and the power of immediate reference to the maps and other documents on which the observations and conclusions of the officers of that Survey have been recorded, is another advantage. This advantage might ultimately admit of considerable extension if the plan suggested by Mr. Jukes be adopted. His evidence shows that a slight addition to the present staff of the Survey would enable it to give, for a small charge, copies of the six-inch maps, with the geological observations entered on them, accompanied by sections and reports for any district that might be desired. The laboratory of the Museum might, at the same time, give analysis of such specimens of soils, rocks, minerals, or ore as might be required, the exact localities from which the specimens were taken being numbered on the maps by the persons collecting them. This supply of information might be extended to the chemical or physical properties of animal and vegetable substances, and to the relations of these properties to the various manufactures depending on them, and to the chemical or physical condition on which the success of such manufactures depend.

1944. 2272.

Should it be considered necessary to contract the limits of this institution to a narrower boundary than that which, until recently, was assigned to it, and to place it on the same footing as the Museum at Jermyn-street, even then the science-teaching would be extensive and valuable. Sir Roderick Murchison gives evidence that the present teaching at Jermyn-street comprises mining, metallurgy, geology, properly so called, chemistry as a basis, physics and natural history. The great difficulty which attends the introduction of the science system of the Science and Art Department into Ireland is the difficulty of obtaining teachers. "But for the instruction given in the Museum of Irish "Industry it would have been necessary altogether to have gone to England for "teachers." Such is the evidence of Dr. Sidney, the secretary to the committee of lectures, which is entitled to weight, as to him was committed the introduction of schools under the Science Minute into Ireland; and, he adds, that with the view of carrying on the science-system in Ireland, he attaches great importance to having a school of instruction in Dublin, where teachers may be brought up. Your Committee is of opinion that Dublin should not be deprived of this school of instruction, sanctioned as it has been by successive Ministries, and upheld as necessary by the present Irish Executive. So far from its being in antagonism to the system of the Science and Art department, a Government School of Science, at the Museum of Irish Industry, would become a highly effective training school for teachers under the Science Minute, and the success of the object which the heads of the Science and Art department are desirous to advance would thus be materially promoted.

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1736.

III.—It is unnecessary to enter into any argument to prove that the character of the Museum of Irish Industry is described correctly in the resolution. That there should be direct responsibility to the Government, and consequently to Parliament, in the case of all institutions, wholly or chiefly supported by public money, will hardly be denied. The recommendations of the Commission of 1862, point to the necessity of an approach in the case of the Royal Dublin Society

Society to that responsibility, which in the Museums of Jermyn-street and of Irish Industry is perfectly attained. The heads of these establishments are directly responsible to Government. They are, moreover, as men of science, responsible to the scientific world for the reputation of the institution over which they preside; their officers, chosen on account of fitness, are equally amenable to the same public opinion; that their scientific brethren should approve of their action must be a stimulus to exertion, as they can best understand its scope, its progress and success.

As regards the Royal Dublin Society, the element of private corporate interests must of necessity influence the Society, and these interests may be at variance with those of the public. The governing body of the Royal Dublin Society is, from its nature, fluctuating, and devoid of any individual responsibility. The Council of the Royal Dublin Society, varying in its composition from year to year, and carrying on its business through means of committees, subject also to annual changes, could not carry out the continual supervision or the perpetuity of direction based on a clear definite conception of the object to be attained, with a clear definite systematic plan for attaining that object. As Dr. Graves stated in his evidence, "It is a bad system attempting to govern educational bodies by means of volunteers." To the questions of Sir E. Grogan, "Does not such an organisation as that of the Royal Dublin Society "tend to bring such agency to bear upon the promotion of the progress of "science and literature that no Government aid or money can command?" Dr. Graves replies, "Yes; I think unless there be some amount of voluntary "agency, institutions will languish; but I still think that voluntary agency, "without control, and subordination, and definite responsibility, will not produce the best results." Sir Edward Grogan: "How can there be any "responsibility more stringent, more important, or more valuable than that of "the conscientious discharge of duty undertaken; will any Government rules "equal that?" Dr. Graves: "It is the highest possible motive; but you have to "take men as you find them; and if gentlemen have a great many other things "to do; if they are, as the Chairman has described them, merely amateur committees, it is not possible to expect from them that continuous systematic devotion to public duty which can be given by a person whose business it is, and "who has no other business to interfere with it."

737. 791. 828. 829. 834. 1228. 1236. 1376.
Mr. Graves, 5125. 5130 to 5133. 5175 to 5197.
5132.
5185.
5186.

This opinion has been supported by all witnesses examined on these points who are not connected with the Royal Dublin Society.

Mr. M'Evoy, 737, 791; Dr. Corrigan, 829, 834; Dr. Barker, 1228, 1230; Sir Robert Kane, 1376, 1421, 1589; Professor Jukes, 1978 to 1982, 2331 to 2334; Professor Sullivan, 3303, 3545, 3570; Professor Galloway, 3626; Dr. Morgan, 3734; Dr. Percival Wright, 3849–55; Dr. Graves, 5125, 5130–33, 5175 to 5197.

IV. and V.—The almost total neglect with which Science and Scientific Institutions were treated by the English Government, previous to the accession of Her Most Gracious Majesty, in 1837, is notorious. It speaks well for the old Irish Legislature that they acted in a more enlightened spirit, and took advantage of the existence of the Royal Dublin Society to establish some scientific institutions, and the means of imparting some scientific information in connection with it; and equally well for the Society, that they expended any care or pains in fostering and encouraging them during the early part of this century when they would otherwise have been ignored.

About nine-and-twenty years ago, however, a change commenced in the views of the British Government; and the late Sir Robert Peel, the Duke of Newcastle, and other statesmen, began to perceive the benefit which the State might derive from the practical applications of science, and the advisability of giving greater facilities for sound scientific education. They sought for and acted on the advice of some of the eminent men of science of that day. One of the results of these enlightened views was the establishment of the Geological Survey of the United Kingdom, the Museums of Economic Geology in London and Dublin, and the preparation for a system of instruction in Geology and its kindred sciences, as described in the documents given in the Appendix, and which were quoted by Sir Robert Kane and Mr. Jukes.

Sir Robert Kane, 1286, 1396, &c. Jukes, 1924 to 1927.

The kind of instruction contemplated was of a deeper, wider, and more practical, because a more thoroughly scientific character than that which had been imparted by the Royal Dublin Society. That this Society should, on behalf of its corporate interests, oppose this more comprehensive scheme as superseding its

its own was, certainly, natural. Unfortuately the Government of the day (1854), when the long contemplated system of instruction came to be put into operation, yielded to too great an extent to the influence set at work by the Society, so that its full development was checked, and its character weakened by too large an infusion of the merely popular element which was the sole constituent of the plan in previous existence in the Royal Dublin Society. Some advance in the right direction was, however, made, and the ground prepared, to a certain extent, for a still further advance on the first opportunity; but if instead of advancing, the Government were now to retrograde to the old system of scientific instruction under amateur agency, it would, as pointed out by Sir Thomas Larcom's letter to the Treasury, February 1863, be such "a reversal of the original intention and of the "policy which has been pursued by the Government for the last 30 years in "Government education in Ireland, as would be the restoration of National "education to the voluntary agency of the Kildare Place Society." This opinion is corroborated by the authority of Dr. Graves.

Professor Sullivan, 3306.
Dr. Graves, 5126.

But there is also this further consideration to be taken into account, that when the arrangement of 1854 was made, and the Royal Dublin Society relieved of its educational functions, it appears from letters of Dr. Playfair, of 6 April, published in the Estimates of 1854–5, and the Minute of the Board of Trade, dated 11 April 1854, that its grant was not diminished on that account, and that it therefore received a virtual increase of over 1,000*l.* per annum, 700*l.* of which was immediately available for the other objects of the Society. This increase was granted on the condition that the Society should ultimately resign all interest in its former educational functions, the salaries of the two remaining professors falling into its funds on their decease. Considering, then, the nature of the system of scientific instruction that could be given at the Museum of Irish Industry, the public advantage to be derived from it, the importance attached to it by those who are responsible for the improvement of Ireland, and the very small expense involved in its maintenance, and even in the extensions proposed, Your Committee are of opinion that any obstacle in the way of that system should be removed, and, therefore, that the Royal Dublin Society should be held to the arrangement of 1854, and altogether relieved of its educational functions so called, retaining the substantial advantage of 1,000 *l.* per annum for its other objects, and having such additional assistance extended to it as should enable it to carry out these objects to efficiency and completeness.

Sullivan.

A veterinary school and an agricultural chemist are legitimate adjuncts to a Society originally formed for the encouragement of agriculture and the improvement of land, and containing so large a body of country gentlemen perfectly capable of forming a judgment in veterinary matters, and the application of agricultural chemistry.

4288.

So far back as the year 1800, an Act was passed providing for a veterinary institution in connection with this Society; and out of a grant of public money, provision was made that certain premises should be appropriated for the purpose. These were to comprise a forge for instruction in shoeing, and a number of loose boxes, to exhibit the treatment of horses labouring under disease. A Veterinary Museum was purchased, which is still in good order and available. Two professors were appointed, and lectures were instituted, on the constitution, diseases, cures, &c. of horses and other domestic animals. About the year 1826 this department of the Society was abandoned, but latterly there has been a most anxious and wide-spread desire to revive it.

4294.

4299.

It has been felt that in a country like Ireland, where one of the main sources of wealth is derived from pasture, a school of instruction, where young men could be sent to obtain a knowledge of the medical treatment of horses, cattle, &c., is of the first importance. No such school exists, and private enterprise has failed to establish one. The Royal Dublin Society has already many of the chief requisites for such a department. The estimate for the necessary buildings has been calculated at about 700 *l.*, and 200 *l.* per annum for the expenses. Should it not be considered advisable that an annual subsidy be given for veterinary purposes, your Committee is of opinion that permission be granted by the Committee of Council, that a portion of the private contributions of the Society may be applied to the maintenance of this department.

Lord Talbot, 2407.
Lord Dunlo, 4366.
Dr. Graves, 5140.
Sir W. Wilde, 5364, 4326.

Cattle

Cattle shows and periodical exhibitions of manufactures, being strictly within the chartered objects of the Society, should also receive every necessary support and encouragement.

A sum of 9,500 *l.* has been recommended by the report of the Commissioners of 1862, and approved of by the Secretary of the Treasury, by letter dated the 10th June 1863, for the immediate wants of the Society, and a further sum of 7,000 *l.* has been proved by evidence before the Committee to be necessary to place the different departments in a proper state of efficiency.

The estimate of the sums necessary to complete the different departments of the Royal Dublin Society is stated to be as follows :—

	£.	£.
Museum of Natural History - - - - -		4,500
Library fittings and furniture - - - -		1,405
Botanical Gardens :		
Museum of Botany, and fittings for same	3,000	
Doubling conservatories - - -	3,000	
Nursing and propagating houses - -	425	
Curator's residence, apartments for pupils	1,000	
Completing Palm House - - -	230	
		7,655
Agricultural Department - - - -		3,000
		£. 16,560

An additional sum to the annual grant for the maintenance of the several departments, and more especially for the purchase of books, is also stated to be necessary.

Your Committee are, however, of opinion that conditions should be attached to these grants.

Council.—As regards the ruling body, the present constitution of the Society is defective. The Commissioners of 1862 thus report : " In the case of other large " societies, with considerable sums of money to disburse, and numerous officers to " control, full powers are vested in the Executive Council, acting on behalf of the " society. The absence of any such provision in this instance has prevented the " Council from acting with the decision and confidence which it would otherwise " have done, and has led to insubordination on the part of some of its officers. It " has also impaired the general usefulness of the Society in this respect. The " Government cannot properly intrust the Society with the disbursement of " public money without being assured that every necessary condition will be " carefully observed, and it is obvious that this assurance cannot exist while all " the decisions of the Council are liable to be reversed by a popular vote." And they recommend, " That while the Council of the Royal Dublin Society, for the " time being, should be vested with full authority to act on behalf of the Society, " the influence of the Society at large should be made more direct and effectual."

Your Committee concur in this recommendation, which the Royal Dublin Society have signified their readiness to accept, by passing a resolution to that effect. 2459.

Library.—In the year 1836, the Committee which sat to inquire into the Royal Dublin Society, unanimously resolved, " That books should not be lent " out of the library ;" and in the Report, upon the same subject, occurred the following passage : " With regard to the propriety of allowing books to be lent " out of the library to members, various opinions have been expressed, and there " is much weight in the arguments advanced in favour of the practice as well as " against it. Upon the whole, however, your Committee are of opinion that the " disadvantages arising from the practice outweigh the advantages which result " from it. It tends to the injury, and sometimes to the loss of the books lent " out ; it induces members of the Society to desire the introduction of works into " the library of that light and amusing description which is naturally most " agreeable to their families, and it subjects to disappointment those who may " be anxious to consult a particular work in the library at the moment when it " is in the house of a member. In special cases, perhaps, it would be expedient

Report Select Committee, 1836, p. xii.

"that the Council should exercise its discretion as to the propriety of lending "out a particular scientific work; but if the practice be permitted at all, it "should only be upon a special application in each individual case to the "Council."

Your Committee has received much conflicting evidence on this point.

2498. On the one hand, it is stated that this library is essentially scientific, and that scientific works cannot be studied so well in a public room as at the private residence of members; that members' families are greatly benefited by the use
238. of the books of the Society; that admission to shows gratis, to Leinster Lawn and to the Botanical Gardens on closed days, and their right of borrowing books, are the few privileges now left to members; that this is the privilege most esteemed by them; that were this privilege removed, the number of annual subscribers would fall off; that faith would not be kept with those members who on the strength of this advantage had become life compounders;
p. 4. that the recommendations of the Select Committee on Public Libraries in 1860, insist strongly on the value of public lending libraries: "Many men, in order "to derive the fullest advantage from books, must have them not only in their "hands but in their houses. The principal advantages offered by foreign "libraries consist in their number, in their entire accessibility, and in the fact "that the books they contain are allowed, on liberal yet sufficiently protective "conditions, to circulate beyond the walls of the library." "A great public
3501. "library ought, above all things, to teach the teachers, to supply with the best
2539. "implements of education those who educate the people, whether in the pulpit,
3113. "the school, or the press. The lending out of books, therefore, which is
3808. "a general characteristic of foreign libraries, should be an essential element
4074. "in the formation of our own;" that this library practically performs for Dublin the same functions that the British Museum Library does for London; that no complaints have been made of inconvenience to the public resulting from this practice, and that hardly any damage to or loss of books worth mentioning has been sustained.

Those who oppose the privilege contend, that there is no public library, in the full sense of the word, in Dublin, and that there ought to be one where every book on the catalogue should, if not actually in hand, be immediately accessible to the visitor; that the contributions of the Society to its Library amount, according to the Estimates of 1861, to the small sum of 63 *l.* 18 *s.* 10 *d.*, whereas the annual public grant amounts to 930 *l.* 4 *s.* 8 *d.*; that its fittings are also paid for by the public, and that, at the present time, there is an application for over 1,000 *l.* to complete this department; that, under these circumstances, there ought to be no claim for privileges, and the library ought to be so constituted as to afford to the public the largest possible accommodation, with the least possible inconvenience; that the establishment of a "private circulating "library" for the benefit of members' families, as the system is described by one
Dr. Waller, of the witnesses, Dr. Waller, late member of the Library Committee, is certainly
4388. not the way in which public money should be expended; the same witness says, "I say it is a general thing that the books taken out for families "are not scientific books, because a gentleman who has three or four sons
4393. "and three or four daughters will not take out a work on fluxions for his "daughters, but a biographical or historical work, or a book of travels. No "doubt a professor takes out a scientific work for himself, uses it promptly, "and returns it promptly, but, in my experience, the class of books gene-"rally taken out are not highly scientific books, but books of general
4394. "reading;" that from this statement it appears that the value of the privilege of borrowing does not seem to be of so great importance to the scientific members of the Society as to the sons and daughters of members; and, as the works borrowed are described as books of general reading, biographies, and travels, it is clear there must be very great weight in the paragraph of the Report of the Committee of 1836, that this privilege "tends to induce members "of the Society to desire the introduction of works into the Library of that light "and amusing description which were naturally most agreeable to their families," although such a tendency is denied by other witnesses connected with the Society; that inconveniences do arise is found from the fact of persons
3793. coming up from the country to consult books on the catalogue, and of persons in Dublin going to the library for the same purpose, and finding the required works removed; that in one case a series of books was taken out of the

the library by a person engaged in tuition, to teach his class; that as to the breach of faith with life compounders, who entered the Society on the strength of this privilege, ample warning was given them by the Report of the Committee of 1836, all the recommendations of which were carried out, with the exception of the one relating to the lending of books, which has hitherto remained in abeyance; that, as regards the recommendations of the Public Libraries Committee, there is no doubt of the value of the lending principle, but that the same Committee in its report lays down this rule, that "it is evident that there "should be in all countries libraries of two sorts—libraries of deposit and "research, and libraries devoted to general reading and circulation of books." The recommendations of this Committee pointed to the establishment of Lending Libraries in towns, and became the basis of the Public Libraries Act; but it is perfectly clear, that they distinctly recognise the necessity of libraries for reference and research. p. 9.

The British Museum Library fulfils these functions for London, and Dublin is entitled to a similar central library, as far as possible similar to that of the British Museum; that this library does not fulfil the functions of the British Museum Library, as stated by Dr. Steele, is clear from the letter of Mr. Panizzi, which states that a volume if not actually in use becomes at once available to any person requiring it; that Dublin has no public library properly so called, Bishop Marsh's Library being chiefly composed of books of theology, the Queen's Inn Library of legal works and confined to members, and the Trinity College Library being also limited to its own members and to those of the Universities of Oxford and Cambridge. If, therefore, the lending principle be adopted, the public would be entitled to claim their share of the privilege, which if granted would obviously render the library useless for reference and research. 3113. 3808. 4074.

The balance of evidence has appeared to your Committee to be unfavourable to the lending system, and they therefore adhere to the unanimous recommendation of the Committee of 1836. They are not, however, prepared to recommend that new books may not be left in the room for a period of three months after delivery.

The Library is now open for three days in the week in the evenings. The Library Committee have been desirous that it should be opened the remaining evenings, but are deterred by the expense. Your Committee are of opinion that the Society should be assisted in carrying out an object so desirable.

Evidence has been given that inconvenience and disappointment have been occasioned to persons coming to Dublin being unable to procure a member's admission to the library. Several suggestions have been made, but on the whole, your Committee are of opinion that the course least open to objection is to leave to the Librarian the power of granting immediate admission, on the recommendation of two respectable persons testifying to their personal knowledge of the applicant. This admission should be provisional, and submitted to the Library Committee at their first meeting.

Museum.—The museum of this and all other institutions in Dublin supported by public funds should be thrown open to the public on a Sunday. This would merely be an extension of the principle already applied to the Botanic Gardens, and long in action at the Zoological Gardens, with the best result.

Dr. Moore, the curator of the Botanic Gardens, reports of the admirable conduct of the immense number of persons who frequent these gardens, and of the beneficial effects of Sunday opening. The National Gallery of Ireland has recently been also opened on the Sunday, and Mr. Mulvany, the director, gives this evidence: "This opening has worked admirably. I have been in the "constant habit, from the commencement, of observing the demeanour of the "visitors on Sundays, and I have been very much pleased to see the interest "taken in the exhibition by the working classes and the people at large. We "have had between 4,000 and 5,000 between two and five o'clock on Sunday, all "orderly and well-behaved." The only objection to the opening is the increased work imposed on the porters and attendants. This can be avoided by increasing their numbers and employing the police, which should be done in this case and in that of the Museum of Irish Industry and of the Royal Irish Academy. 1627.

The Museum of Natural History should be carefully restricted within its legitimate limits, as defined by Dr. Playfair's letter of 6 April, and the Minute of the Board of Trade, dated 11 April 1854. No expenditure should be allowed either for purchasing technological objects, such as series of iron ores, with metallurgical 3831.

lurgical processes, or any similar mineral, vegetable, or animal collections, or for fitting up and exhibiting such objects should they happen to be presented to the Society. Neither the public nor the private funds of the Society could be legitimately devoted to such objects, and it must be clearly understood that your Committee recommend the additional grant for the completion of the Museum, on the condition that it be solely applied to Natural History arrangements.

Botanical Gardens.—Evidence has been given that the opening of these gardens to the public every day in the week would be approved of by the inhabitants of Dublin, and save much inconvenience and disappointment.

p. 65. Mr. Moore, the curator, gives this evidence before the Commission of 1862: "I would respectfully beg to suggest that the gardens should be open to the "public on every week-day, free of charge, as at Kew and Edinburgh. We, "perhaps, should require one close day for shifting plants and for cleaning; but "I would assimilate the admission to that at Kew; at present a charge of 6*d.* "for grown persons, and 3*d.* for children is made on Tuesdays and Thursdays. "The total amount received during the year for these admissions is the paltry "sum of 25 *l.*, and for that there is an amount of vexatious disappointment to "people who have mistaken the days, and who have brought their families, at "the expense of cab hire, that you can scarcely have a notion of. I have fre- "quently seen instances of that kind, and the father of the family obliged to "return with his wife and children without being able to see the gardens, after "incurring what to him was considerable expense."

VI.—Mr. Lowe, in his letter to the Treasury, of 16 May 1863, in reply to that of Sir Thomas Larcom, says, that "the museum, no doubt departing from the "principles of the establishment on which it was founded, namely, the School of
1294. 2129. 2130. "Mines, in London, early assumed the form of embracing the whole of the in- "dustrial arts." It appears from evidence, that four out of the six galleries of the Museum of Irish Industry contain nearly the same class of objects that are exhibited in Jermyn-street, while the lectures have never yet occupied so wide a field as those in Jermyn-street, several subjects being lectured on in London, for which no professors have yet been appointed in Dublin, while the only one subject lectured on in Dublin, which is not in London, is botany, and these lectures have been chiefly given in the Royal Dublin Society's theatre, and its botanic garden. Your Committee recommends, that the Museum of Irish Industry should have at least the same scope allowed to it as the Museum in Jermyn-street; and for that purpose a Professor of Mining, and a Professor of Mechanics should be added to the present Professors of Physics, Chemistry, Botany, Zoology, and Geology; a Professor of Metallurgy is not included in this addition, as his duties might, perhaps, for the present, be undertaken by the Professor of Chemistry, or by the Analytical Chemist. As there is no direct necessity for a Professor of Botany in a School of Mines, that Professorship might then be restored to the Royal Dublin Society; his lectures being given under their council in illustration of the gardens. The Commissioners in their Report of 1862, recognise two exceptions in Ireland to the system recently laid down by the Department of Science and Art, that teachers of science are not to be retained on fixed salaries by Government. They consider that in Ireland as in England, instruction might with advantage be given in geology and mineralogy, with especial reference to mining; and as agriculture is the great industry of Ireland, Government would be justified in maintaining an agricultural professor. Objections, it is true, have been urged by high authority against forming a "School of Mines" or a "School of Practical Science relating to Mines and Manufactures in Ireland," on the ground that there are few mines and manufactures in that country. But the technical scientific instruction to be given in the Stephen's Green Museum means, as in Jermyn-street, not actual instruction in the arts themselves, but that elementary and complete instruction in those sciences which can be applied to the industrial arts, and which persons will consequently find of use to them while they are learning those arts, and for ever after while they are practising them. There is, therefore, no real necessity for giving that instruction in the precise localities where the arts are practised. Were it otherwise, the School of Mines in London ought to be in Cornwall or Durham. The only reason for having a School of

of Mines in a mining district is, that both the school and the mine should be under the same management and control, so that the students in the one should be selected from the workers in the other. When both the school and the mines are managed by Government, as on the Continent, such an arrangement is possible. With our constitution, however, this is impossible; and we must be content to wait until miners gradually learn the value of the instruction to be obtained in the school, and voluntarily come to it from the mining districts indifferently. The reasons for having different local centres for accumulating and imparting information are admirably set forth in Lord Lincoln's letter of January 1845:—"I feel assured not only that the existence of separate institutions in London and in Dublin will be a source of many positive advantages to both, but that the utility of such institutions is very mainly dependent upon their extension into different localities, the expansion of their stores from local sources, the discovery of new agencies, and the interchange of views and opinions, whether of local origin or otherwise, the existence of which cannot fail to elicit general results and to promote the cause of general science. It is upon these grounds that, looking to the institution already proposed in London as the model of that proposed to be founded in Dublin, I should nevertheless desire to see it placed under a superintendence in a great measure distinct." *Vide* Appendix, 1924.

In these observations your Committee cordially and unanimously concur. They cannot see why such of the youth of Ireland as wish to devote themselves to the establishment or management of such manufactures as depend on the application of any science, or such as wish to prepare themselves for the business of life, either in Ireland or elsewhere, by acquiring a knowledge of practical science, should not have the same facilities afforded them in Dublin as those of England have in London. Moreover, if the Geological Survey of the United Kingdom has a distinct Irish branch, with distinct collections and offices, the Irish people should unquestionably be allowed all the collateral and additional advantages connected with it, which the people of England derive from the English branch.

If a school of agriculture were to be formed in addition to that of mines, the Professors of Zoology and Botany, with a Professor of Agriculture, the agricultural chemist, and the veterinary establishment, would form natural parts of it, and it would be most naturally connected with the Agricultural Museum of the Royal Dublin Society.

A line might thus be drawn between the two institutions, and the strictest care should be taken, that neither in the collections or lectures, should either overlap or trench on the functions of the other. Were this arrangement carried out, and the Museum of Irish Industry placed on a similar footing to that of Jermyn-street, it would be well that its title should be altered to one more distinctly defining its objects, when these objects are definitely settled.

Whether the scope of the Museum of Irish Industry should be widened, and its lectures and collections extended to the illustration of other industrial objects, is a question on which your Committee decline to give any opinion. It is far too wide a subject to be dealt with by them. That such a plan, however, was contemplated by the Department of Science and Art, 10 years ago, and that it was to be carried out in Dublin through the agency of the Museum of Irish Industry, is clear from Mr. Cole's Memorandum to that Department of January 1854, in which your Commitee may remark that much of the substance of their resolutions may be found represented.

"But still a culminating point for industrial education would be necessary, as it is for medicine, law, &c. Students are prepared at the Queen's Colleges for the faculty of medicine, but they come to Dublin to complete their course at the hospitals, &c. And so should the student of industrial science and art. In Dublin he should be able to find the highest technical instruction, with access to museums, and collections larger and more complete than could be found in the provinces, and I therefore think that a special college for applied science and art in union with the existing institutions would have to be created in Dublin. There are already materials for founding such an institution on the objects of which a large expenditure already takes place, but the action is dispersed and ill-defined.

"There is the Museum of Irish Industry, and which is also the central office of the Geological Survey, with its professors of chmistry and its collections supported by public funds directly responsible to Government.

"There is the Royal Dublin Society, with its professors of chemistry, natural history, &c.,

&c., with botanic gardens, partial museums, &c., supported in the main by Parliamentary funds, but managed by a society of private gentlemen under a council and committee, and very imperfectly responsible for the administration of the public money, which has averaged for many years 6,000 *l.* a-year. The professors are elected by the Society at large. The anomalous position of this Society has frequently excited the attention of Parliament, and of the Irish Government, as shown by the Report of a Committee which sat in 1836, Parliamentary Paper, No. 445, and a Commission appointed in 1842, and as shown in an accompanying paper prepared by Major Larcom.

"It appears to me that, if public money is to be applied in support of these several institutions, all of which have a direct bearing upon the promotion of science and art, it is necessary that they should be re-organised on a sound basis, and connected with the department, and be administered, subject to proper responsibility, to Parliament. At present, the relations between the Museum of Irish Industry and Royal Dublin Society seem very anomalous, and public money is devoted to promoting two institutions, in some respect, competing.

"It will not be disputed that it is undesirable to have two centres of action in Dublin supported by public funds, ostensibly promoting the same objects. It therefore becomes necessary to elect one, and it must naturally be that which ensures the highest amount of responsibility to Parliament, and is capable of being connected with the general system provided by the National Board and the Queen's colleges and universities. As a first step, it appears desirable to separate the lines of action between the Museum of Irish Industry and the Royal Dublin Society. This may be done, I think, without difficulty, by confiding the promotion of direct instruction to the proposed college and the administration of certain public exhibitions to the Royal Dublin Society. The Museum of Irish Industry would then become the College of Science and Art in Dublin, having charge of the administration of direct instruction, and representing the department in the capital.

"The extent, organization, and development of this central college will have to be examined hereafter. It is only necessary to observe that the superintendence of it would necessarily engage the full services of the principal, and require his constant supervision.

"I would propose that no public funds voted to the Royal Dublin Society should be applied to those branches of instruction administered in the special college. But it seems to me to be for public advantage that public grants should continue to be voted to the Royal Dublin Society in promoting certain objects which partake of the nature of public exhibitions, such as the Botanic Gardens, a zoological museum, a gallery of fine arts, and an agricultural museum. Arrangements should be made for extending these departments, and placing the administration of them on a sound and responsible basis in connection with the department, bearing in mind that they should be made conducive to the objects of the special college and the interests of all Ireland.

"By these means, on the one hand, very ample provision would be made for supplying industrial instruction throughout all Ireland; and on the other, without interfering with the constitution of an old-established society, the Royal Dublin Society would be relieved of the duties of affording instruction, whilst its influence would be greatly extended by the increased importance which would be given to its public exhibitions of botany, horticulture, agriculture, zoology, and the fine arts.

"If these principles and the course of action be approved, I shall be prepared to submit the details by which I conceive they may be carried into effect."

Your Committee considers, therefore, that it would be advisable to retain, define, and strengthen an institution founded by such eminent authority, and of such recognised value to Ireland.

VII.—While your Committee feel sure that they may confidently anticipate, from the zeal and activity of the scientific officers in the public service, every effort to impart their knowledge to all classes of persons, and may point to the efforts made both in London and Dublin as justifying this confidence, it does not seem reasonable to impose on them as a task the necessity of giving lectures to persons who may be indifferent to them.

Nor, on the other hand, ought the State to pay for such lectures.

Short courses of popular lectures, at such a low rate of admission as to be virtually free, are given at Jermyn-street; and the experience of the success of these lectures, and the great value set on them by the working classes for whom they are intended, is highly favourable to their continuance.

They come, however, within that kind of work which is best done, as well as most cheerfully undertaken, and graciously received, when it springs from voluntary efforts.

1963. 4167. 3532. 2193. Dr. Barker, 1228, 1236; Sir R. Kane, 423, 1456; Mr. Jukes 1977, 5678, 2334; Dr. Sullivan, 3179, 3517, 3569; Dr. Morgan, 3733; Dr. Wright, 3883.

VIII.—The necessity for having one scientific head to regulate scientific instruction is recognised by all the officers examined by your Committee, and their opinion is backed by that of Dr. Percival Wright and the Very Reverend Dr. Graves.

The

The system of lectures formerly carried on by the Royal Dublin Society was useful as imparting some general information to the audience, and exciting a spirit of inquiry in the minds of some of them. In order, however, to give anything deserving the name of systematic instruction in science, lectures require to be supplemented by direct personal intercourse between the students and the lecturers, in order that their studies may be directed, questions answered, specimens handled, the use of instruments shown, and experiments explained. Arrangements have therefore to be made for the accommodation of the students in the intervals between the lectures, order has to be maintained among them, and numerous details to be adjusted, all requiring the presence of one competent and permanent superior officer to direct and control the different parts of the system.

While that superior officer should be directly and individually responsible to Government for the well-working of the system, we yet fully recognise the advantage of the plan adopted in Jermyn-street, that the director and professors should meet periodically in council, to arrange the internal economy of the school, and maintain among themselves that mutual harmony and co-operation on which its well-working so largely depends.

IX. *Provincial Lectures.*—The condition of Ireland, with regard to science, is such that provincial lectures are required not only to rouse a spirit of further inquiry among those who may know something of it, but even to make known the very name of many branches of science to persons who would otherwise never hear of them. The sum of 500 *l.* is annually granted for this purpose, and is included in the Estimates of the Museum of Irish Industry, and the system is managed by the Committee of Lectures, the origin and composition of which has been already referred to. In the Report of this Committee of Lectures, for 1860, is given a general account of their system, and they cite, with effect, the resolutions in favour of these lectures, adopted by the Royal Society of London, and concurred in by the Council of the British Association for the Advancement of Science, in 1857. The passage is as follows:—

"On the whole, the Committee consider that the combination of the two "methods as now carried on, viz., short public courses delivered by eminent "men of science, followed, after an interval, by an examination set by a compe- "tent examiner, and class or school instruction for a longer period, by teachers "sufficiently qualified for this purpose, is perhaps the best arrangement which "present circumstances will admit of, and the most advantageous mode of "applying the limited funds at their command. They are confirmed in this "opinion by finding that it is exactly the course recommended in a "series of resolutions, adopted by the Council of the Royal Society of London, "and concurred in by the Council of the British Association for the Advance- "ment of Science, in the year 1857, on the question as to whether any steps "could be adopted by Government or Parliament, calculated to promote the "cause of science in this country. From these resolutions, to which their "attention has been called by the Rev. Dr. Lloyd, late President of the British "Association, and a member of this Committee, they extract the following "passage:—

"'The President and Council (of the Royal Society) recommend that the "'establishment of classes in metropolitan and provincial schools, where those "'who have not the means or opportunity of studying at the Universities may "'be taught the elements of physical science, on a systematic plan, be pro- "'moted by grants from Government, in aid of such funds as may be locally "'contributed for that purpose. That the formation of provincial museums "'and libraries be encouraged in like manner, and that provincial lectures, "'accompanied by examinations, be established in Great Britain, in towns "'which request this assistance and engage to provide a part of the expense; "'such lectures to be in aid of the schools above-mentioned. So that, by "'means of the two combined, a sound knowledge of the principles and appli- "'cations of science may be systematically taught.'

"It is a gratification to the Committee to find that the course they are "following agrees so closely with that recommended by these learned bodies, "perhaps the highest authorities in the kingdom on such a subject."

In the evidence of Dr. Sydney, the Secretary of the Committee, will be found a full

a full account of the details of the working of the system. In order to test the value of these provincial lectures in the year 1860, a letter was addressed by Dr. Sidney to different localities in Ireland where lectures had been delivered at various periods, simply asking the question how far that system commended itself to their approval, and he received a number of answers which are embodied in the Report of the Committee of Lectures, 1860, to the Department of Science and Art. These answers illustrate the value of the system in a very striking manner. As they are referred to in the Report, and are documents of importance as coming from very high authorities, it is to be regretted that these replies have been suppressed in the Report published by the Department of Science and Art.

Dr. Lloyd, 1039.

The continuance of these lectures have been recommended by every Witness examined before your Committee on this subject. Some objections have been urged against the lecture system by persons not examined before your Committee. The principal objections were two-fold; first, to the time of the year in which they are delivered; and, secondly, to the shortness of the courses. It is considered that the long winter evenings would be the most convenient period for the working classes to attend these lectures. But as these lectures are delivered by professors of the Queen's Colleges, of the Museum of Irish Industry, &c., it would not be possible for them to leave their own courses at that time of the year. To obtain the services of other eminent men would be equally difficult, nor does it appear that this arrangement could be carried out without the exclusive employment of professors for these lectures, which the very limited nature of the fund granted for them would entirely forbid. As to the second point, the shortness of the courses are objected to on the grounds that a few lectures are not likely to teach science to anyone; but this objection arises from a misconception of the object of these lectures. They were never originally intended to teach science, but to awaken a taste, and pioneer the way for scientific education. It is true, however, that some attempts at teaching have been grafted on these lectures during the last few years, and a system of examination adopted. An impression seems to prevail that these lectures are in some way antagonistic to the science school system, but on this point it is well to quote the Report of the Committee of Lectures for 1861: "In conclusion, the Committee think it right to say, that "the results of this year have confirmed them in the views put forward at length "in their last year's report, that the system of provincial lectures and examina- "tions which they have been carrying on for the last few years is not opposed "to that of class instruction by certificated teachers, but, on the contrary, affords "the best means of gradually introducing it. In every instance in which the "Committee have succeeded in starting such classes, their success has been "directly and immediately owing to the opening made, the relations established, "and the taste for scientific knowledge disseminated by their previous opera- "tions." Such is the statement of the Committee after a year's experience of that mode of double instruction, partly by provincial lectures, and partly by class instruction.

Dr. Lloyd, 1027.

The Provincial Lectures, by preparing the way, and creating a desire for scientific instruction, and the Museum of Irish Industry, by forming a body of competent masters, become material adjuncts to the success of the science school system, which Your Committee does not think can stand alone in Ireland, however successful it may be in England.

It is to be regretted that the small fund available for the lecture system should be diminished by a portion of it being diverted to the payment of the secretary. Complaints have reached your Committee, from various localities, of the difficulty of obtaining a course of lectures, but this difficulty has not arisen from any unwillingness of the Committee to give to these towns the benefit of lectures, but from the inadequacy of funds. It is, therefore, to be hoped that the salary of the secretary may be in addition to the annual grant for lectures, and the recommendations of the Committee of Lectures of 10th January 1861 thereby carried into effect.

X.—Although the recommendations of the Report of the Commissioners of 1862 would ultimately, if carried out, have affected the Royal Irish Academy, the Royal Hibernian Academy, the Royal Zoological Society, the Dublin National Gallery, the professors engaged in giving the instruction mentioned in

in the title page of the Report, and the Irish Branch of the Geological Survey of the United Kingdom, no one officer of these bodies was examined, or even informed of the issuing of the Commission. As soon as the Report reached the Societies, they met and protested against the recommendation, "that advantage would be gained if all Parliamentary grants in aid of Science and Art at Dublin were included in the estimate of the Royal Dublin Society, and were paid through its medium, inasmuch as they then would be brought under consideration in one point of view, and the Council of the Royal Dublin Society would have an opportunity of making any representations which the circumstances of the time might render proper in reference to them."

They condemned it as affecting their dignity and independence, and as sowing the seeds of interferences and dissentions. The Government showed that it recognised the injurious effects of this recommendation, for it at once gave assurance to the societies that it should not be carried into effect. The Royal 785.
Dublin Society, through its Honorary Secretary, Mr. Maunsell, have declared to your Committee that it was not at their instigation that it was made; nor does there appear to be a hint of such a suggestion in the evidence taken by the Commission.

Had an inquiry been held by the Commissioners of 1862 upon the other societies which they were appointed to inquire into, and upon which they reported without taking evidence, Your Committee are of opinion that the representatives of those societies might have made good their claims for aid.

It must be borne in mind that Dublin is not a provincial town, but the chief city of a country; that the loss of her Legislature is not supplied by a Vice-Regal Court; that these learned associations do not merely tend to interest and keep together in the capital of Ireland a number of persons of high intelligence and attainments, but that the presence and influence of such persons must influence and elevate society. State assistance, judiciously applied to institutions such as these into which your Committee have inquired, though its results cannot be proved by figures, makes itself felt throughout the country, and encourages the formation of tastes, studies, and researches, and an activity of intellectual labour, the value of which it is impossible to over estimate.

In conclusion, your Committee have to observe that, in putting forward the claims of the Dublin scientific institutions for increased assistance, they have been induced to do so from the evidence they have received of the necessity of that assistance to put these societies into working order and efficiency. The necessity of a very large portion of this increased expenditure has already been recommended by the Science Inspector of the Science and Art Department, also by the Commission of 1862, and it has been approved of by the Treasury.

15 *July* 1864.

PROCEEDINGS OF THE COMMITTEE.

Mercurii, 20° *die Aprilis*, 1864.

MEMBERS PRESENT:

Mr. Gregory.	Sir Edward Grogan.
Mr. Luke White.	Mr. George.
Sir Colman O'Loghlen.	Mr. Lefroy.
Mr. Cogan.	Mr. Waldron.
The O'Conor Don.	Mr. Leader.
Mr. Dillwyn.	

Mr. *Gregory* was called to the Chair.

The Committee deliberated on the course of proceeding.

[Adjourned to Monday next, at Twelve o'clock.

Lunæ, 25° *die Aprilis*, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Mr. George.	Mr. Waldron.
Mr. Leader.	Mr. Luke White.
Sir Edward Grogan.	Mr. Cogan.
Mr. O'Reilly.	Mr. Lefroy.
Mr. Dillwyn.	Sir Colman O'Loghlen.
Sir Robert Peel.	

Mr. *G. Woods Maunsell* examined.

[Adjourned to Thursday next, at Twelve o'clock.

Jovis, 28° *die Aprilis*, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Mr. George.	Mr. Luke White.
Mr. Waldron.	Mr. Lefroy.
Sir Edward Grogan.	Mr. Cogan.
Mr. O'Reilly.	Sir Colman O'Loghlen.
Sir Robert Peel.	Mr. Leader.

Dr. *D. J. Corrigan* and Mr. *John M'Evoy* were severally examined.

[Adjourned to Monday next, at Twelve o'clock.

Lunæ, 2° *die Maii*, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Mr. Leader.	Mr. Waldron.
Mr. O'Reilly.	Sir Edward Grogan.
Sir Colman O'Loghlen.	Mr. Cogan.
Mr. Lefroy.	Mr. George.
Mr. Luke White.	Mr. Dillwyn.

Mr. *John M'Evoy*, Mr. *G. W. Maunsell*, and Dr. *D. J. Corrigan* were severally furthe examined.

Mr. *R. H. Scott*, The Rev. *H. Lloyd*, and Dr. *W. Barker* were severally examined.

[Adjourned to Thursday next, at Two o'clock.

Jovis, 5° *die Maii*, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Mr. Dillwyn.	Mr. George.
Mr. O'Reilly.	Mr. Waldron.
Sir Colman O'Loghlen.	Mr. Lefroy.
Mr. Luke White.	Mr. Leader.
Mr. Cogan.	Lord Henry Lennox.
Sir Robert Peel.	Sir Edward Grogan.

The Rev. *H. Lloyd* further examined.

Sir *Robert Kane* examined.

[Adjourned to Monday, at Twelve o'clock.

Lunæ, 9° *die Maii*, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Mr. Waldron.	Mr. Lefroy.
Mr. George.	Mr. O'Reilly.
Mr. Dillwyn.	Mr. Leader.
Sir Colman O'Loghlen.	Mr. Luke White.
Mr. Cogan.	Sir Edward Grogan.

Sir *Robert Kane* further examined.

Mr. *G. F. Mulvany* examined.

[Adjourned to Thursday next, at Twelve o'clock.

Jovis, 12° *die Maii*, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Sir Robert Peel.	Mr. Cogan.
Sir Edward Grogan.	Mr. Leader.
Mr. O'Reilly.	Sir Colman O'Loghlen.
Mr. Lefroy.	The O'Conor Don.
Mr. George.	Mr. Luke White.

Dr. *F. J. Sydney* and Mr. *Joseph B. Jukes* were severally examined.

[Adjourned to Tuesday, 31st May, at Twelve o'clock.

Martis, 31° *die Maii*, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Sir Edward Grogan.	The O'Conor Don.
Mr. Lefroy.	Mr. George.
Mr. Waldron.	Sir Colman O'Loghlen.
Sir Robert Peel.	Mr. Dillwyn.
Mr. Luke White.	

Mr. *Joseph B. Jukes* again examined.

Adjourned to Thursday next, at Twelve o'clock.

Jovis, 2° die Junii, 1864.

MEMBERS PRESENT.

Mr. GREGORY in the Chair.

Sir Colman O'Loghlen.	Mr. George.
Sir Robert Peel.	Mr. Waldron.
Sir Edward Grogan.	Mr. Lefroy.

The Lord *Talbot de Malahide* (attending by permission of the House of Lords) and Dr. *William Edward Steele* were severally examined.

[Adjourned to Wednesday next, at Twelve o'clock.

Mercurii, 8° *die Junii,* 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Sir Colman O'Loghlen.	Mr. George.
Mr. Waldron.	Mr. Leader.
Sir Edward Grogan.	Mr. Lefroy.
The O'Conor Don.	Mr. Luke White.
Sir Robert Peel.	

Dr. *W. E. Steele* again examined.

Professor *W. K. Sullivan* examined.

[Adjourned to To-morrow, at Twelve o'clock.

Jovis, 9° *die Junii,* 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Mr. Waldron.	Sir Colman O'Loghlen.
Mr. George.	The O'Conor Don.
Sir Edward Grogan.	Sir Robert Peel.
Mr. Dillwyn.	Mr. Luke White.
Mr. Lefroy.	

Professor *W. K. Sullivan* again examined.

Professor *Robert Galloway* examined.

[Adjourned to Monday next, at Twelve o'clock.

Lunæ, 13° *die Junii,* 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Mr. Waldron.	Mr. Leader.
Sir Edward Grogan.	Mr. Dillwyn.
Mr. Lefroy.	Mr. O'Reilly.
Sir Robert Peel.	Sir Colman O'Loghlen.
Mr. Luke White.	

Dr. *W. E. Steele* again examined.

Dr. *John Morgan,* Dr. *E. P. Wright,* and Mr. *William Andrews* were severally examined.

[Adjourned to Thursday next, at Twelve o'clock.

Jovis, 16° *die Junii*, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Sir Edward Grogan.	Sir Robert Peel.
Mr. Waldron.	Sir Colman O'Loghlen.
Mr. Lefroy.	The O'Conor Don.

Sir *Roderick I. Murchison*, Lord *Dunlo*, and Dr. *John F. Waller* were severally examined.

Mr. *William Andrews* again examined.

[Adjourned to Monday next, at Twelve o'clock.

Lunæ, 20° *die Junii*, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Mr. Waldron.	Mr. George.
Mr. Lefroy.	Sir Edward Grogan.
Mr. Dillwyn.	Sir Colman O'Loghlen.
Mr. O'Reilly.	Mr. Leader.

The Committee deliberated.—Motion made, and Question proposed, "That Dr. Todd, the Librarian of Trinity College, be now examined"—(Mr. *Dillwyn*).—Amendment proposed, to leave out from the word "That" to the end of the Question, in order to add the words, "Dr. Waller be permitted to explain the evidence given by him on the 16th instant, according to the usage of Committees in such cases"—(Sir *Edward Grogan*)—instead thereof.—Question put, That the words proposed to be left out stand part of the Question.—The Committee divided:

Ayes, 3.	Noes, 4.
Mr. Lefroy.	Mr. Waldron.
Mr. Dillwyn.	Mr. George.
Mr. O'Reilly.	Sir Edward Grogan.
	Sir Colman O'Loghlen.

Words added.—Main Question, as amended, put, and *agreed to*.

Dr. *J. F. Waller* again examined.

Dr. *J. H. Todd*, Mr. *W. Andrews*, and the Very Rev. Dr. *Charles Graves* were severally examined.

[Adjourned to Thursday next, at Twelve o'clock.

Jovis, 23° *die Junii*, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Mr. Waldron.	Sir Robert Peel.
Sir Edward Grogan.	The O'Conor Don.
Sir Colman O'Loghlen.	Mr. Leader.
Mr. Lefroy.	Mr. George.

The Very Rev. Dr. *C. Graves* again examined.

Sir *William R. Wilde* and the Rev. *J. H. Jellett* were severally examined.

[Adjourned to Monday next, at Twelve o'clock.

Lunæ, 27° *die Junii*, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Sir Edward Grogan.	Mr. George.
Mr. O'Reilly.	Mr. Lefroy.
Mr. Waldron.	Mr. Leader.
The O'Conor Don.	Sir Colman O'Loghlen.
Sir Robert Peel.	

Captain *J. F. D. Donnelly* examined.

[Adjourned to Monday next, at Twelve o'clock.

Lunæ, 4° *die Julii*, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Mr. Dillwyn.	Mr. Lefroy.
Mr. O'Reilly.	Mr. Leader.
Mr. Cogan.	The O'Conor Don.
Mr. George.	Sir Colman O'Loghlen.
Mr. Waldron.	Sir Robert Peel.
Sir Edward Grogan.	Mr. Luke White.

The Resolutions to be proposed by the Chairman were read, as follow:—

That it is the opinion of this Committee,—

"1. That it would be injurious to the interests of the public that the Museum of Irish Industry should be suppressed or amalgamated with the Royal Dublin Society.

"2. That whether the Museum of Irish Industry be placed on the same footing as that of Jermyn-street, or whether its functions be extended, it may be made as an independent institution of great utility to Ireland.

"3. That the Museum of Irish Industry is distinct from the Royal Dublin Society, as being a public institution, supported by public funds solely for the use of the public, directed by a permanent scientific head, responsible to the Government, and administered exclusively by scientific men, selected on grounds of fitness.

"The Royal Dublin Society, on the other hand, is composed of a number o subscribing members, and is consequently a private body, the members of which must necessarily have some preferential privileges to the possible prejudice of the public; it is directed by a Council, whose members are fluctuating, and have no individual responsibility, and it is administered by Committees of the same nature as the Council.

"ROYAL DUBLIN SOCIETY.

"4. That the Royal Dublin Society was originally intended, according to its charter, for the encouragement of agriculture, for which, by its constitution, it was peculiarly fitted. Its scope was subsequently extended, and educational functions in art and science were assigned to it. There is, however, nothing now in the circumstances of Ireland which renders it expedient that the technical and scientific instruction given in that country, at the expense of the State, should be entrusted to the management of a body of private gentlemen, rather than to a public scientific institution as in England.

"5. That the Royal Dublin Society should be relieved of those educational functions for the management of which it is not specially adapted. It has been proved by unanimous testimony, that the establishment of a Veterinary School would be of great importance to Ireland. This would legitimately fall within the province of the Royal Dublin Society. Their agricultural chemist should also be retained. The Royal Dublin Society having, moreover, been entrusted with funds for forming a Botanical Garden, a Museum of Natural History, and a Library, it is expedient that it should be enabled, without further loss of time, to make these several departments efficient and complete; and, also, that it should be assisted in obtaining proper facilities for its cattle shows and periodical exhibitions of manufactures. On the other hand, certain conditions should be attached to the granting of the funds necessary to carry out these objects.

"*Council.*—Such a modification of the charter and bye-laws of the Society should be effected as shall delegate to the Council the general management of the Society, the appointment of officers, and full authority to act on its behalf.

"*Library.*—The Resolution unanimously agreed to by the Committee on the Royal Dublin Society of 1836, 'that books should not be lent out of the library,' should be accepted by the Society. Admissions to read should be obtained on presentation to the librarian of a recommendation, signed by a member of the Royal Dublin Society, or a magistrate, or an officiating clergyman of any denomination.

"*Museum.*—The Museum should be opened to the public on Sundays, after the hours of Divine Service.

"*Botanical Gardens.*—The Botanical Gardens should be opened to the public every day of the week, free of charge, as at Kew. On two days in the week they might be closed till two o'clock, for the delivery of lectures, for shifting plants, and for cleaning.

"Museum of Irish Industry.

"6. The Museum of Irish Industry should be either placed on a similar footing to that of Jermyn-street Museum, as regards its collections, professors, and lectures, or those lectures and collections might be extended to the illustration of such other industrial objects as may be sanctioned by the Government.

"The Museum of this institution should be opened to the public on Sundays, after the hours of Divine Service.

"7. That courses of lectures entirely free are inexpedient, and that henceforth it shall be no part of the duty of any lecturer to deliver gratuitous lectures.

"That lectures henceforth should be as thoroughly scientific as possible, and that each course should be given in the place most appropriate to it.

"8. That all systematic instruction followed by examination and prizes or certificates of competency should be given under the direction and control of one officer, responsible to Government for the efficiency of the system, under similar arrangements to those existing in Jermyn-street.

"9. That provincial lectures are calculated to be of great use in arousing and spreading a desire for scientific knowledge throughout Ireland; it appears desirable and possible to bring them into more direct connection with the science-teaching system of the Department of Science and Art, and to make both mutually conducive to the success of each. They should be placed under the Department of Science and Art; and by the appointment of Dr. Sidney, the present secretary of the Committee of Lectures, as the local officer of the Department in Ireland, the advantages of his local knowledge and experience might still be retained. The recommendations of the Committee of Lectures, of the 10th January 1861, in regard to the salary of Dr. Sidney, should be carried out. The provisional and complex administration of the Committee of Lectures would then become unnecessary.

"10. The Committee disagrees altogether with the recommendation of the Report of the Committee of 1862, on the Royal Dublin Society, &c., &c., 'that advantage would be gained if all Parliamentary Grants in aid of Science and Art at Dublin were included in the estimate of the Royal Dublin Society, and were paid through its medium, inasmuch as they then would be brought under consideration in one point of view, and the Council of the Royal Dublin Society would have an opportunity of making any representations which the circumstances of the time might render proper in reference to them.'

"The unanimous opinion of the other scientific societies is opposed to this recommendation, as being uncalled for, unsupported by evidence, and mischievous; and the Committee entirely concurs in the objections urged by the Societies against this proposal.

"Zoological Society.

"11. This well-managed Society contributes in a high degree to the instruction and amusement of the public. At the present time the Society is endeavouring, by private subscriptions, to erect a fence, with the view of inclosing an additional space which is necessary for the security of the gardens. The Board of Works requires that the fence should be of peculiar construction, involving a large expense. As this Society has been the first to give what may be called gratuitous admission to the poorer classes, it is advisable that some small assistance should be granted towards the completion of this necessary work.

"Royal Irish Academy.

"12. The Royal Irish Academy combines the objects of the London Royal and Antiquarian Societies, and has acquired the highest reputation for the learning and activity of its researches. The Museum is the richest and most important in Europe in Celtic antiquities. The Library contains manuscripts and works of great value, illustrative of early Irish history. It has published papers scientific and antiquarian of no ordinary

interest. It has never been obnoxious to the imputation of political or sectarian bias. Differences have arisen between the representatives of science and antiquities as to the distribution of the Parliamentary grant of 500 *l.* These differences are owing to the small amount available for the pressing and absolute wants of each department. Assistance is required to enlarge the Museum, to increase the staff, and aid scientific researches. This Society has the strongest claims on the liberality of Parliament. The Museum should be open to the public on Sundays, after the hours of Divine Service."

The Resolutions to be proposed by Sir *Edward Grogan* were read, as follow:—

That it is the opinion of this Committee,—

"1. That the sum of 9,500 *l.* as recommended by the Report of the Commissioners of 1862, and approved of by the Secretary of the Treasury, by letter dated 10th June 1863, should be placed at the disposal of the Royal Dublin Society. And the further sum of 7,000 *l.*, proved by the evidence laid before the Committee to be necessary to enable the Society to fulfil the duties imposed on it by Parliament, should be also recommended to be granted to the Royal Dublin Society.

"2. In order to carry out the work of the several departments of the Royal Dublin Society in a more efficient manner, an increase of 3,955 *l.* should be recommended to be made to the annual grant, as appears necessary from the evidence laid before us. The entire Parliamentary grant to be appropriated to the departments of the Society in the proportions approved of by the Treasury.

"3. The appropriation of the funds derived from the subscriptions of the members, and all other sources, other than the funds granted by Parliament, should be left to the discretion of the Society. The Society not to enter upon new branches of work without the previous sanction and authorisation of the Treasury.

"4. The charter and bye-laws of the Royal Dublin Society to be altered so as to give the Council larger powers in the management of the affairs of the Society. The Council to consist in future of the President, the Vice-Presidents, the Honorary Secretaries, the Chairman (or Vice-Chairman) of each of the Committees, and 15 other members to be elected by the Society. One-third of the elected members who shall have been in office for the longest time without re-election to retire in each year, and to be immediately re-eligible. The Council to have the power of appointing or dismissing the paid officers of the Society. The Committees to consist of nine members each.

"5. Your Committee have had abundant evidence that the Royal Dublin Society, with such changes as have been suggested in the constitution of the Council, &c., is competent to undertake the teaching of practical science in Ireland, as recommended by the Report of the Commissioners of 1862 to be entrusted to them, if the Government shall see fit to require them so to do. But, in the event of the Government deciding that the teaching of practical science in Ireland should be entrusted to two institutions, the Royal Dublin Society and the Museum of Irish Industry, your Committee are of opinion the duties of the two institutions, as regards the teaching of practical science, should in future be kept separate and distinct, and a more definite scope and purpose should be assigned to each institution.

"6. This separation of the duties to be entrusted to each institution can be best effected by assigning to the Royal Dublin Society the teaching of the sciences connected with Agriculture, and to the Museum of Irish Industry the teaching of those connected with Mining.

"7. We recommend, accordingly, that the Professorships of Botany, of Zoology, of Agricultural Chemistry, and of Mineralogy, be attached to the Royal Dublin Society; the Professors to be elected by the Council, and to be under its control; and that the Professorships of Geology, of Practical Mining and Metallurgy, of Physics, of general Chemistry, as well as the office of Laboratory Chemist, be attached to the Museum of Irish Industry.

"8. The services of the Professors of the two institutions to be available for the lectures in the provincial towns, and the arrangement of these lectures, as well as the organization of science schools, be placed under the Committee of Lectures, as at present.

"9. In order to enable the Royal Dublin Society to carry out its proposed scheme of agricultural education, a Lectureship on Veterinary Surgery and Medicine be attached to the Society, and funds should be provided for the illustration of this science.

"10. It has been fully shown to the satisfaction of the Committee, that the charges as to the conduct of the Society being influenced by political or sectarian motives are entirely without foundation.

"11. The privilege of borrowing books from the Library, enjoyed by the members of the Royal Dublin Society, should be continued, but this privilege should not extend to books of reference, and such other books as the Library may consider ought to be permanently retained in the Library. All new books should be placed without delay in the Library, and not be lent out to members until they shall have been in the Library for three months, and the period for which books may be borrowed be limited to a fortnight.

"12. The

"12. The annual grant of 500 *l.*, now placed upon the Estimate of the Royal Dublin Society, in trust for the Zoological Society, should be recommended to be in future paid directly to the latter Society."

Motion made, and Question proposed, That the Resolutions to be proposed by the Chairman be now considered.—Amendment proposed, to leave out the words "the Chairman," in order to insert the words "Sir Edward Grogan," instead thereof—(Sir *E. Grogan*).—Question put, That the words "the Chairman" stand part of the Question.—The Committee divided:

Ayes, 7.	Noes, 5.
Mr. Dillwyn.	Mr. George.
Mr. O'Reilly.	Mr. Waldron.
Mr. Cogan.	Sir Edward Grogan.
The O'Conor Don.	Mr. Lefroy.
Sir Colman O'Loghlen.	Mr. Leader.
Sir Robert Peel.	
Mr. Luke White.	

Main Question put, and *agreed to.*

Motion made, and Question proposed, (1.) "That it would be injurious to the interests of the public that the Museum of Irish Industry should be suppressed or amalgamated with the Royal Dublin Society."—Amendment proposed, after the word "would" to insert the word "not"—(Mr. *Waldron*).—Question put, That the word "not" be there inserted.—The Committee divided:

Ayes, 4.	Noes, 8.
Mr. George.	Mr. Dillwyn.
Mr. Waldron.	Mr. O'Reilly.
Sir Edward Grogan.	Mr. Cogan.
Mr. Leader.	Mr. Lefroy.
	The O'Conor Don.
	Sir Colman O'Loghlen.
	Sir Robert Peel.
	Mr. Luke White.

Amendment proposed, to leave out from the word "suppressed" to the end of the Question—(Mr. *Lefroy.*)—Question put, That the words proposed to be left out stand part of the Question.—The Committee divided:

Ayes, 7.	Noes, 5.
Mr. Dillwyn.	Mr. George.
Mr. O'Reilly.	Mr. Waldron.
Mr. Cogan.	Sir Edward Grogan.
The O'Conor Don.	Mr. Lefroy.
Sir Colman O'Loghlen.	Mr. Leader.
Sir Robert Peel.	
Mr. Luke White.	

Main Question put, and *agreed to.*—*Resolved,* (1.) "That it would be injurious to the interests of the public that the Museum of Irish Industry should be suppressed or amalgamated with the Royal Dublin Society."

Motion made, and Question, (2.) "That whether the Museum of Irish Industry be placed on the same footing as that of Jermyn-street, or whether its functions be extended, it may be made as an independent institution of great utility to Ireland,"—put, and *agreed to.*

Motion made, and Question proposed, (3.) "That the Museum of Irish Industry is distinct from the Royal Dublin Society, as being a public institution, supported by public funds solely for the use of the public, directed by a permanent scientific head, responsible to the Government, and administered exclusively by scientific men, selected on grounds of fitness. That the Royal Dublin Society, founded by Royal Charter, is composed of a number of subscribing members, and is so far a private body, the members of which must necessarily have some preferential privileges to the possible prejudice of the public; it is directed by a Council, whose members are fluctuating, and have no individual responsibility, and it is administered by committees of the same nature as the Council.—Amendment proposed, to leave out from the word "body," in line 6, to the word "it," in line 7—(Mr. *Lefroy*).—Question, That the words proposed to be left out stand part of the Question,—put, and *negatived.*

Amendment proposed, after the word "body," to insert the words "the members of which have some preferential privileges"—(Mr. *Cogan*).—Question, That those words be there inserted, put, and *agreed to.*

Main Question, as amended, put, and *agreed to.*—*Resolved,* "That the Museum of Irish Industry is distinct from the Royal Dublin Society, as being a public institution, supported by

by public funds solely for the use of the public, directed by a permanent scientific head, responsible to the Government, and administered exclusively by scientific men, selected on grounds of fitness. That the Royal Dublin Society, founded by Royal Charter, is composed of a number of subscribing members, and is so far a private body, the members of which have some preferential privileges; it is directed by a Council, whose members are fluctuating, and have no individual responsibility, and it is administered by committees of the same nature as the Council."

ROYAL DUBLIN SOCIETY.

Motion made, and Question proposed, (4.) "That the Royal Dublin Society was originally intended, according to its charter, for the encouragement of husbandry and other useful arts. Its scope was subsequently extended, and educational functions in art and science were assigned to it. There is, however, nothing now in the circumstances of Ireland which renders it expedient that the technical and scientific instruction given in that country, at the expense of the State, should be entrusted to the management of a body of private gentlemen, rather than to a public scientific institution, as in England."—Amendment proposed, to leave out from the word "it," in line 4, to the end of the Question, in order to add the words "by Government and Parliament. It is therefore inexpedient that it should be deprived of such of its educational functions as appertain to its scientific collections, and to the promotion of agriculture"—(Mr. *Waldron*)—instead thereof.—Question put, That the words proposed to be left out stand part of the Question.—The Committee divided:

Ayes, 7.	Noes, 5.
Mr. Dillwyn.	Mr. George.
Mr. O'Reilly.	Mr. Waldron.
Mr. Cogan.	Sir Edward Grogan.
The O'Conor Don.	Mr. Lefroy.
Sir Colman O'Loghlen.	Mr. Leader.
Sir Robert Peel.	
Mr. Luke White.	

Main Question put.—The Committee divided:

Ayes, 6.	Noes, 6.
Mr. Dillwyn.	Mr. Cogan.
Mr. O'Reilly.	Mr. George.
The O'Conor Don.	Mr. Waldron.
Sir Colman O'Loghlen.	Sir Edward Grogan.
Sir Robert Peel.	Mr. Lefroy.
Mr. Luke White.	Mr. Leader.

Whereupon the Chairman declared himself with the Ayes.

Resolved, (4.) "That the Royal Dublin Society was originally intended, according to its charter, for the encouragement of husbandry and other useful arts. Its scope was subsequently extended, and educational functions in art and science were assigned to it. There is, however, nothing now in the circumstances of Ireland which renders it expedient that the technical and scientific instruction given in that country, at the expense of the State, should be entrusted to the management of a body of private gentlemen, rather than to a public scientific institution, as in England."

Motion made, and Question proposed, (5.) "That the Royal Dublin Society should be relieved of those educational functions for the management of which it is not specially adapted. It has been proved by unanimous testimony, that the establishment of a Veterinary School would be of great importance to Ireland. This would legitimately fall within the province of the Royal Dublin Society. Their agricultural chemist should also be retained. The Royal Dublin Society having, moreover, been entrusted with funds for forming a Botanical Garden, a Museum of Natural History, and a Library, it is expedient that it should be enabled, without further loss of time, to make these several departments efficient and complete; and, also, that it should be assisted in obtaining proper facilities for its cattle shows and periodical exhibitions of manufactures. Certain conditions should be attached to the granting of the funds necessary to effect these objects.—*Council:* Such a modification of the charter and bye-laws of the Society should be effected as shall delegate to the Council the general management of the Society, the appointment of officers, and full authority to act on its behalf.—*Library:* The Resolution unanimously agreed to by the Committee on the Royal Dublin Society of 1836, 'that books should not be lent out of the library,' should be accepted by the Society. Admissions to read should be obtained on presentation to the librarian of a recommendation, signed by a member of the Royal Dublin Society, or at the discretion of the librarian on the recommendation of two respectable persons.—*Museum:* The Museum should be opened to the public on Sundays, after the hours of Divine Service.—*Botanical Gardens:* The Botanical Gardens should be open to the public every day of the week, free of charge, as at Kew. On two days in the week they might be closed till two o'clock, for the delivery of lectures, for shifting plants, and for cleaning."—Amendment proposed, to leave out from the word "That" to the words

words "It has," in line 3—(Mr. *Waldron*).—Question put, That the words proposed to be left out stand part of the Question.—The Committee divided:

Ayes, 7.	Noes, 5.
Mr. Dillwyn.	Mr. George.
Mr. O'Reilly.	Mr. Waldron.
Mr. Cogan.	Sir Edward Grogan.
The O'Conor Don.	Mr. Lefroy.
Sir Colman O'Loghlen.	Mr. Leader.
Sir Robert Peel.	
Mr. Luke White.	

Amendment proposed, after the word "manufactures," to insert the words, "These objects would be effected by the grant of the sum of money recommended by the Report of the Commissioners of 1862, and approved of by the Secretary of the Treasury, June 1863, being placed at the disposal of the Royal Dublin Society, together with such further grants, annual or otherwise, as Parliament may judge necessary, to enable the Society to carry out its duties"—(Mr. *Cogan.*)—Question, That those words be there inserted, put, and *agreed to.*

Amendment proposed, after the word "duties" in the last Amendment, to add the words, "The appropriation of the funds derived from the subscriptions of the members, and all other sources, other than the funds granted by Parliament, should be left to the discretion of the Society. The Society not to enter upon new branches of work without the previous sanction and authorization of the Treasury"—(Sir *Edward Grogan.*)—Question put, That those words be there added.—The Committee divided:

Ayes, 5.	Noes, 7.
Mr. George.	Mr. Dillwyn.
Mr. Waldron.	Mr. O'Reilly.
Sir Edward Grogan.	Mr. Cogan.
Mr. Lefroy.	The O'Conor Don.
Mr. Leader.	Sir Colman O'Loghlen.
	Sir Robert Peel.
	Mr. Luke White.

Amendment proposed, after the word "appointment," in line 16, to insert the words, "control and dismissal"—(Mr. *Dillwyn*).—Question put, That those words be there inserted.—The Committee divided:

Ayes, 10.	Noes, 2.
Mr. Dillwyn.	Mr. Cogan.
Mr. O'Reilly.	Sir Colman O'Loghlen.
Mr. George.	
Mr. Waldron.	
Sir Edward Grogan.	
Mr. Lefroy.	
Mr. Leader.	
The O'Conor Don.	
Sir Robert Peel.	
Mr. Luke White.	

Amendment proposed, to leave out from the word "behalf" to the word "admissions," in line 19, in order to insert the words "The privilege of borrowing books from the Library, enjoyed by the members of the Royal Dublin Society, should be continued, but this privilege should not extend to books of reference, and such other books as the Library Committee may consider ought to be permanently retained in the Library. All new books should be placed without delay in the Library, and not be lent out to members until they shall have been in the Library for three months, and the period for which books may be borrowed be limited to a fortnight"—(Sir *Edward Grogan*)—instead thereof.—Question put, That the words proposed to be left out stand part of the Question.—The Committee divided:

Ayes, 6.	Noes, 6.
Mr. Dillwyn.	Mr. Cogan.
Mr. O'Reilly.	Mr. George.
The O'Conor Don.	Mr. Waldron.
Sir Colman O'Loghlen.	Sir Edward Grogan.
Sir Robert Peel.	Mr. Lefroy.
Mr. Luke White.	Mr. Leader.

Whereupon the Chairman declared himself with the Ayes.

Amendment proposed, to leave out the words, "The Museum should be opened to the public on Sundays, after the hours of Divine Service"—(Sir *Edward Grogan*).—Question put,

That the words proposed to be left out stand part of the Question.—The Committee divided:

Ayes, 7.	Noes, 4.
Mr. Dillwyn.	Mr. George.
Mr. O'Reilly.	Sir Edward Grogan.
Mr. Cogan.	Mr. Lefroy.
Mr. Waldron.	Mr. Leader.
The O'Conor Don.	
Sir Colman O'Loghlen.	
Mr. Luke White.	

Amendment proposed, to leave out from the word "Kew," in line 26, to the end of the Question—(Sir *Edward Grogan.*)—Question put, That the words proposed to be left out stand part of the Question.—The Committee divided:

Ayes, 7.	Noes, 4.
Mr. Dillwyn.	Mr. George.
Mr. O'Reilly.	Mr. Waldron.
Mr. Cogan.	Sir Edward Grogan.
Mr. Lefroy.	Mr. Leader.
The O'Conor Don.	
Sir Colman O'Loghlen.	
Mr. Luke White.	

Main Question, as amended, put, and *agreed to.—Resolved,* (5.) "That the Royal Dublin Society should be relieved of those educational functions for the management of which it is not specially adapted. It has been proved by unanimous testimony, that the establishment of a Veterinary School would be of great importance to Ireland. This would legitimately fall within the province of the Royal Dublin Society. Their agricultural chemist should also be retained. The Royal Dublin Society having, moreover, been entrusted with funds for forming a Botanical Garden, a Museum of Natural History, and a Library, it is expedient that it should be enabled, without further loss of time, to make these several departments efficient and complete; and, also, that it should be assisted in obtaining proper facilities for its cattle shows and periodical exhibitions of manufactures. These objects would be effected by the grant of the sum of money recommended by the Report of the Commissioners of 1862, and approved of by the Secretary of the Treasury, June 1863, being placed at the disposal of the Royal Dublin Society, together with such further grants, annual or otherwise, as Parliament may judge necessary to enable the Society to carry out its duties. Certain conditions should be attached to the granting of the funds necessary to effect these objects.

"*Council.*—Such a modification of the charter and bye-laws of the Society should be effected as shall delegate to the Council the general management of the Society, the appointment, control, and dismissal of officers, and full authority to act on its behalf.

"*Library.*—The Resolution unanimously agreed to by the Committee on the Royal Dublin Society of 1836, 'that books should not be lent out of the Library,' should be accepted by the Society. Admissions to read should be obtained on presentation to the librarian of a recommendation, signed by a member of the Royal Dublin Society, or at the discretion of the librarian on the recommendation of two respectable persons.

"*Museum.*—The Museum should be opened to the public on Sundays, after the hours of Divine Service.

"*Botanical Gardens.*—The Botanical Gardens should be open to the public every day of the week, free of charge, as at Kew. On two days in the week they might be closed till two o'clock, for the delivery of lectures, for shifting plants, and for cleaning."

[Adjourned to Wednesday next, at Twelve o'clock.

Mercurii, 6° die Julii, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Mr. George.	The O'Conor Don.
Mr. Waldron.	Mr. Lefroy.
Sir Robert Peel.	Mr. O'Reilly.
Mr. Leader.	Mr. Dillwyn.
Mr. Cogan.	Mr. Luke White.
Sir Edward Grogan.	

Museum of Irish Industry.

Motion made, and Question proposed, (6.) "That the Museum of Irish Industry should be placed on a similar footing to that of the Jermyn-street Museum, as regards its collections, professors, and lectures, or those lectures and collections might be extended to the illustration of such other industrial objects as may be sanctioned by the Government. The Museum of this institution should be opened to the public on Sundays, after the hours of Divine Service."—Amendment proposed, to leave out from the word "Government," in line 4, to the end of the Question—(Mr. *Lefroy.*)—Question put, That the words proposed to be left out stand part of the Question.—The Committee divided:

Ayes, 6.	Noes, 5.
Mr. Dillwyn.	Mr. George.
Mr. O'Reilly.	Sir Edward Grogan.
Mr. Cogan.	Mr. Lefroy.
Mr. Waldron.	Mr. Leader.
The O'Conor Don.	Sir Robert Peel.
Mr. Luke White.	

Main Question put, and *agreed to.*—*Resolved*, (6.) "That the Museum of Irish Industry should be placed on a similar footing to that of the Jermyn-street Museum, as regards its collections, professors, and lectures, or those lectures and collections might be extended to the illustration of such other industrial objects as may be sanctioned by the Government.

"The Museum of this institution should be opened to the public on Sundays, after the hours of Divine Service."

Motion made, and Question, (7.) "That courses of systematic lectures entirely free are inexpedient, and that henceforth it shall be no part of the duty of any lecturer to deliver such lectures gratuitously.

"It has been proved that free courses of popular lectures have been productive of good, and might be given occasionally with advantage"—put, and *agreed to.*

Motion made, and Question, (8.) "That all systematic instruction followed by examination and prizes or certificates of competency, should be given under the direction and control of one officer, responsible to Government for the efficiency of the system, under similar arrangements to those existing in Jermyn-street"—put, and *agreed to.*

Provincial Lectures.

Motion made, and Question, (9.) "That provincial lectures are calculated to be of great use in arousing and spreading a desire for scientific knowledge throughout Ireland; and for this purpose the annual grant of 500 *l.* should be continued. The recommendations of the Committee of Lectures, of the 10th January 1861, in regard to the salary of the Secretary, should be carried out"—put, and *agreed to.*

Motion made, and Question, (10.) "That the Committee disagrees with the recommendation of the Report of the Committee of 1862, on the Royal Dublin Society, &c., &c., 'that advantage would be gained if all Parliamentary grants in aid of Science and Art at Dublin were included in the estimate of the Royal Dublin Society, and were paid through its medium, inasmuch as they then would be brought under consideration in one point of view, and the Council of the Royal Dublin Society would have an opportunity of making any representations which the circumstances at the time might render proper in reference to them.' The unanimous opinion of the other Scientific Societies is opposed to this recommendation, as being unsupported by evidence injurious in its effect, and not sought for by the Royal Dublin Society. And the Committee concurs in the objections urged by the Societies against this proposal"—put, and *agreed to.*

Royal Zoological Society.

Motion made, and Question, (11.) "That this well-managed Society contributes in a high degree to the instruction and amusement of the public. At the present time the Society is endeavouring by private subscriptions to erect a fence, with the view of inclosing an additional space, which is necessary for the security of the gardens. The Board of Works requires that the fence should be of peculiar construction, involving a large expense. As this Society has been the first to give what may be called almost gratuitous admission to the poorer classes, it is advisable that assistance should be granted towards the completion of this and other necessary works"—put, and *agreed to.*

Royal Irish Academy.

Motion made, and Question proposed, (12.) "That the Royal Irish Academy combines the objects of the London Royal and Antiquarian Societies, and has acquired the highest reputation for the learning and activity of its researches. The Museum is the richest and most important in Europe in Celtic antiquities. The Library contains manuscripts and works of

great value, illustrative of early Irish history. It has published papers scientific and antiquarian of no ordinary interest. Differences have arisen between the representatives of science and antiquities as to the distribution of the annual Parliamentary grant of 500 *l.* These differences are owing to the small amount available for the pressing and absolute wants of each of these departments. Assistance is required to enlarge the Museum, to increase the staff, and to aid scientific researches. This Society has the strongest claims on the liberality of Parliament. The Museum should be open to the public on Sundays, after the hours of Divine Service."—Amendment proposed, to leave out from the word "Parliament" to the end of the Question—(Mr. *Lefroy.*)—Question put, That the words proposed to be left out stand part of the Question.—The Committee divided:

Ayes, 6.	Noes, 3.
Mr. Dillwyn.	Mr. George.
Mr. O'Reilly.	Sir Edward Grogan.
Mr. Cogan.	Mr. Lefroy.
Mr. Waldron.	
The O'Conor Don.	
Mr. Luke White.	

Main Question put, and *agreed to.*—*Resolved*, (12.) "That the Royal Irish Academy combines the objects of the London Royal and Antiquarian Societies, and has acquired the highest reputation for the learning and activity of its researches. The Museum is the richest and most important in Europe in Celtic antiquities. The Library contains manuscripts and works of great value, illustrative of early Irish history. It has published papers scientific and antiquarian of no ordinary interest. Differences have arisen between the representatives of science and antiquities as to the distribution of the annual Parliamentary grant of 500 *l.* These differences are owing to the small amount available for the pressing and absolute wants of each of these departments. Assistance is required to enlarge the Museum, to increase the staff, and to aid scientific researches. This Society has the strongest claims on the liberality of Parliament. The Museum should be open to the public on Sundays, after the hours of Divine Service."

Motion made, and Question put, "That it has been fully shown to the satisfaction of this Committee, that the charges as to the conduct of the Society being influenced by political or sectarian motives are entirely without foundation"—(Sir *Edward Grogan.*)—The Committee divided:

Ayes, 4.	Noes, 5.
Mr. George.	Mr. Dillwyn.
Mr. Waldron.	Mr. O'Reilly.
Sir Edward Grogan.	Mr. Cogan.
Mr. Lefroy.	The O'Conor Don.
	Mr. Luke White.

[Adjourned to Monday next, at Twelve o'clock.

Lunæ, 11° *die Julii*, 1864.

MEMBERS PRESENT:

Mr. GREGORY in the Chair.

Mr. Dillwyn.	Sir Robert Peel.
Sir Edward Grogan.	Mr. Lefroy.
Mr. O'Reilly.	Sir Colman O'Loghlen.
Mr. Leader.	The O'Conor Don.
Mr. Cogan.	Mr. Luke White.

Draft Report proposed by the Chairman, read 1° and 2°, paragraph by paragraph.

The Committee proceeded with the consideration of the Draft Report.

Paragraph 67 read. "If we except the Portlock collection of the Irish fauna and flora, which has been only temporarily placed in the Museum of Irish Industry, and which was always meant to be, and should be, transferred to the Museum of the Royal Dublin Society when in a condition to receive it, the collections of the Museum of Irish Industry are strictly conformable to the limitation just stated. There is not the slightest ground for stating that the collections of the Museum of Irish Industry and of the Royal Dublin Society are similar. The transfer of those of the former to the latter place would be a great scientific blunder, at the same time that it would be a positive injury to the Geological Survey. The recommendation that the Museum should be separate from the School of Science is also founded upon a mistake as to the nature and objects of the collections which your Committee repeat have

two

two distinct objects, namely, for the use of the officers of the survey, and the illustration of the lectures of the professors. These primary objects do not preclude the use of such collections by the general public; and it appears that their use in this way has been attended with advantage."—Amendment proposed, to leave out from the word "similar," in line 6, to the end of line 8—(*Sir Edward Grogan*).—Question put, That the words proposed to be left out stand part of the paragraph.—The Committee divided: *Vide* Commission, 1862.

Ayes, 6.	Noe, 1.
Mr. Cogan.	Sir Edward Grogan.
Mr. Dillwyn.	
Mr. Lefroy.	
Mr. O'Reilly.	
Sir Robert Peel.	
Mr. Luke White.	

Question, That this paragraph stand part of the proposed Report—put, and *agreed to.*

Paragraph 73 read.—"The Chairs of Chemistry and Geology here spoken of were established in connection with the Museum of Irish Industry, so that only two professorships, viz., of physics and botany, were, in reality, transferred from the Royal Dublin Society; and these alone could be said to be common to the two institutions. It was understood at the time that the arrangement respecting the Professors of Chemistry and Mineralogy to the Royal Dublin Society was intended merely as a mode of superannuating them; for the Government had no other means of adequately doing so. The Professors of Chemistry and Geology appointed to the Museum of Irish Industry were, in reality, the successors of the superannuated professors of the Royal Dublin Society. The fact of those new professors being appointed 'Lecturers to the Museum of Irish Industry' clearly shows that the Government intended at that time to sever, as occasion offered, all connection between the educational staff and the Royal Dublin Society."—Amendment proposed, to leave out from the word "institutions," in line 4, to the end of the paragraph—(Sir *Edward Grogan*).—Question put, That the words proposed to be left out stand part of the paragraph.—The Committee divided:

Ayes, 6.	Noe, 1.
Mr. Cogan.	Sir Edward Grogan.
Mr. Dillwyn.	
Mr. Lefroy.	
Mr. O'Reilly.	
Sir Robert Peel.	
Mr. Luke White.	

Question, That this paragraph stand part of the proposed Report—put, and *agreed to.*

Paragraph 78 read. "This compromise made by the Department of Science and Art practically broke down, so far as the functions of the joint committee were concerned; for it appears that after the first year the professors annually arranged all their lectures at a meeting held under the presidence of the Director of the Museum. It does not appear that their programme for each year was officially sent by the professors to the committee, and if it at all came under their notice, it must have been communicated by the Director of the Museum of Irish Industry in his capacity of member of the committee, for, as Director, he had no control over the popular lectures."—Paragraph, by leave, *withdrawn.*

Paragraph 84 read. "As the Museum of Irish Industry was established before the Department of Science and Art, and the provisional system of instruction carried on there inaugurated before the scheme of science schools was thought of, the statement of Captain Donnelly, that the object of that institution was the education of science teachers, is devoid of any foundation. The Museum of Irish Industry was clearly intended for the education of persons who intended to apply science to industry; but there is, however, no reason why it should not be, at the same time, a normal school for science teachers."—Paragraph, by leave, *withdrawn.*

Paragraph 97 read. "As this important institution has not been subjected to Parliamentary inquiry, it has been considered necessary by your Committee to report upon it at some length."—Paragraph, by leave, *withdrawn.* 4846, 4848, 4852.

Paragraph 101 read. "That neither exclusion from nor admission into this learned body seems to have been dictated in the smallest degree at any time by religious or political bias. The composition of its council and members clearly shows the confidence entertained by all classes in Ireland as to its perfect impartiality."—Paragraph, by leave, *withdrawn.*

Paragraph 115 read. "Before the establishment of the Museum of Irish Industry there was not anywhere in Ireland any collection of mineral, vegetable, and animal products, so arranged as to show any of their uses, or the processes by which they were converted from raw materials into articles of use, neither has this been done in any other museum down to the present day. The Museum of Irish Industry does this, and more, inasmuch as it also exhibits in the collections of the geological survey some of the scientific relations of the mineral products, rocks, fossils, minerals, and ores, more systematically, and with greater

completeness, than is done in any other museum in Ireland."—Amendment proposed, to leave out all the words from the word "day," in line 5, to the end of the paragraph—(Sir *Edward Grogan*).—Question put, That the words proposed to be left out stand part of the paragraph.—The Committee divided:

Ayes, 4.	Noe, 1.
Sir Colman O'Loghlen.	Sir Edward Grogan.
Mr. O'Reilly.	
Mr. Cogan.	
Mr. Dillwyn.	

Question, That this paragraph stand part of the proposed Report—put, and *agreed to.*

Paragraph 119 read. "It is obvious that it never occurred to Dr. Apjohn to suppose that the Royal Dublin Society was able to supply these wants, or he would not have pointed so forcibly to the geological branch of the Ordnance Survey as the only then existing means of doing so."—Question put, That this paragraph stand part of the proposed Report.—The Committee divided:

Ayes, 4.	Noe, 1.
Mr. Cogan.	Sir Edward Grogan.
Mr. Dillwyn.	
Sir Colman O'Loghlen.	
Mr. O'Reilly.	

Paragraph 124 read. "Evidence in favour of the suppression or amalgamation of the Museum of Irish Industry with the Royal Dublin Society has been given solely by persons actually members of that Society, with the exception of Captain Donnelly. All other witnesses, not belonging to the Society, who have been examined on these points, have expressed the strongest disapproval of any such proceeding."—Question put, That this paragraph stand part of the proposed Report.—The Committee divided:

Ayes, 3.	Noes, 2.
Mr. Cogan.	Sir Edward Grogan.
Mr. Dillwyn.	Mr. Leader.
Mr. O'Reilly.	

[Adjourned to Wednesday next, at 12 o'clock.

Mercurii, 13° *die Julii*, 1864.

MEMBERS PRESENT.

Mr. GREGORY in the Chair.

Mr. Lefroy.	Mr. Cogan.
Sir Edward Grogan.	Sir Robert Peel.
Mr. Luke White.	The O'Conor Don.
Mr. Dillwyn.	Sir Colman O'Loghlen.

Paragraph 137 read. "It has been felt that in a country like Ireland, where one of the main sources of wealth is derived from pasture, a school of instruction, where young men could be sent to obtain a knowledge of the medical treatment of horses, cattle, &c., is of the first importance. No such school exists, and private enterprise has failed to establish one. The Royal Dublin Society has already many of the chief requisites for such a department. The estimate for the necessary buildings has been calculated at about 700 *l.*, and 200 *l.* per annum for the expenses. Should it not be considered advisable that an annual subsidy be given for veterinary purposes, your Committee is of opinion that permission be granted by the Committee of Council, that a portion of the private contributions of the Society may be applied to the maintenance of this department."—Amendment proposed, to leave out from the word "expenses," in line 7, to the end of the paragraph—(Sir *E. Grogan.*)—Question put, That the words proposed to be left out stand part of the paragraph.—The Committee divided:

Lord Talbot, 2407.
Lord Dunlo, 4366.
Dr. Graves, 5140.
Sir W. Wilde, 5364.
4326.

Ayes, 3.	Noes, 3.
Mr. Luke White.	Mr. Lefroy.
Mr. Dillwyn.	Sir Edward Grogan.
Sir Robert Peel.	Mr. Cogan.

Whereupon the Chairman declared himself with the Ayes.

Question, That this paragraph stand part of the proposed Report—put, and *agreed to.*

Paragraph

Paragraph 148 read. "Those who oppose the privilege contend, that there is no public library, in the full sense of the word, in Dublin, and that there ought to be one where every book on the catalogue should, if not actually in hand, be immediately accessible to the visitor; that the contributions of the Society to its library amount, according to the Estimates of 1861, to the small sum of 63 *l.* 18 *s.* 10 *d.*, whereas the annual public grant amounts to 930 *l.* 4 *s.* 8 *d.*; that its fittings are also paid for by the public, and that at the present time, there is an application for over 1,000 *l.* to complete this department; that, under these circumstances, there ought to be no claim for privileges, and the library ought to be so constituted as to afford to the public the largest possible accommodation, with the least possible inconvenience; that the establishment of a 'private circulating library' for the benefit of members' families, as the system is described by one of the witnesses, Dr. Waller, late member of the Library Committee, is certainly not the way in which public money should be expended; the same witness says, 'I say it is a general thing 'that the books taken out for families are not scientific books, because a gentleman 'who has three or four sons and three or four daughters will not take out a work 'on fluxions for his daughters, but a biographical or historical work, or a book of 'travels. No doubt a professor takes out a scientific work for himself, uses it promptly, 'and returns it promptly, but, in my experience, the class of books generally taken out 'are not highly scientific books, but books of general reading;' that from this statement it appears that the value of the privilege of borrowing does not seem to be of so great importance to the scientific members of the Society as to the sons and daughters of members; and, as the works borrowed are described as books of general reading, biographies, and travels, it is clear there must be very great weight in the paragraph of the Report of the Committee of 1836, that this privilege 'tends to induce members of the 'Society to desire the introduction of works into the library of that light and amusing de-'scription which were naturally most agreeable to their families,' although such a tendency is denied by other witnesses connected with the Society; that inconveniences do arise is found from the fact of persons coming up from the country to consult books on the catalogue, and of persons in Dublin going to the library for the same purpose, and finding the required works removed; that in one case a series of books were taken out of the library by a person engaged in tuition, to teach his class; that as to the breach of faith with life compounders, who entered the Society on the strength of this privilege, ample warning was given them by the Report of the Committee of 1836, all the recommendations of which were carried out, with the exception of the one relating to the lending of books, which has hitherto remained in abeyance; that, as regards the recommendations of the Public Libraries Committee, there is no doubt of the value of the lending principle, but that the same Committee in its report lays down this rule, that 'it is evident that there should be in all 'countries libraries of two sorts—libraries of deposit and research, and libraries devoted to 'general reading and circulation of books.' The recommendations of this Committee pointed to the establishment of Lending Libraries in towns, and became the basis of the Public Libraries Act; but it is perfectly clear, that they distinctly recognise the necessity of libraries for reference and research."—Amendment proposed, to leave out from the word "reading" in line 19, to the words "that inconveniences"—(*Mr. Cogan*).—Question put, That the words proposed to be left out stand part of the paragraph.—The Committee divided:

Dr. Waller, 4395–96.

4394.

3793.

p. 9.

Ayes, 3.	Noes, 2.
Mr. Luke White.	Sir Edward Grogan.
Mr. Dillwyn.	Mr. Cogan.
Sir Robert Peel.	

Question, That this paragraph stand part of the proposed Report—put, and *agreed to.*

Paragraph 150 read. "The balance of evidence has appeared to your Committee to be unfavourable to the lending system, and they therefore adhere to the unanimous recommendation of the Committee of 1836; they are not, however, prepared to recommend that new books may not be left in the room for a period of three months after delivery."—Question put, That this paragraph stand part of the proposed Report.—The Committee divided:

Ayes, 3.	Noes, 3.
Mr. Luke White.	Mr. Lefroy.
Mr. Dillwyn.	Sir Edward Grogan.
Sir Robert Peel.	Mr. Cogan.

Whereupon the Chairman declared himself with the Ayes.

Paragraph 155 read. "The Museum of Natural History should be carefully restricted within its legitimate limits, as defined by Dr. Playfair's letter of 6th April, and the Minute of the Board of Trade, dated 11th April 1854. No expenditure should be allowed either for purchasing technological objects, such as series of iron ores, with metallurgical processes, or any similar mineral, vegetable, or animal collections, or for fitting up and exhibiting such objects should they happen to be presented to the Society. Neither the public nor the private funds of the Society could be legitimately devoted to such objects, and it must be clearly understood that your Committee recommend the additional grant for the completion of the Museum,

3831.

Museum, on the condition that it be solely applied to Natural History arrangements."—Amendment proposed, to leave out the words " or for fitting-up and exhibiting such objects should they happen to be presented to the Society "—(*Sir E. Grogan*).—Question put, That the words proposed to be left out stand part of the paragraph.—The Committee divided:

Ayes, 2.	Noes, 2.
Mr. Dillwyn.	Mr. Lefroy.
Sir Robert Peel.	Sir Edward Grogan.

Whereupon the Chairman declared himself with the Ayes.

Question, That this paragraph stand part of the proposed Report—put, and *agreed to.*

Paragraph 178 read. " Had an inquiry been held by the Commissioners of 1862, upon the other societies which they were appointed to inquire into, and upon which they reported without taking evidence, your Committee are of opinion that the representatives of those societies might have made good their claims for aid."—Question put, That this paragraph stand part of the proposed Report.—The Committee divided:

Ayes, 4.	Noe, 1.
Mr. Lefroy.	Sir Edward Grogan.
Mr. Dillwyn.	
Sir Robert Peel.	
The O'Conor Don.	

Amendment proposed, That the following paragraph be inserted in the proposed Report: "In consequence of the number of public lectures which each professor has to give, the systematic or strictly educational courses for students are reduced to 30 lectures. In order to save time by not having to go over the same subject twice, or repeat the same experiments, an attempt was made to dovetail the free courses delivered in the theatre of the Royal Dublin Society with the day courses given at the Museum of Irish Industry. It was believed that by giving the introductory part, which could be made popular at the former institution, the teaching of the elements of science to the students might be combined with popular instruction to a larger class, at the same time that the professors would have more time to devote to the higher and more abstract parts of their courses subsequently in the Museum of Irish Industry. Experience has shown, however, that, with few exceptions, the persons who attend the lectures at the Museum of Irish Industry do not attend at those given at the Royal Dublin Society. No advantage can possibly be gained by subdividing a course of lectures, and delivering a part of it in one institution to one set of persons, and another in a different place and to a different class, and, in some cases, as appears by the annual programme, after an interval of several months. Such a system, which necessarily diminishes the efficiency of the instruction, while it confers no advantage upon the public, and entails much additional and unnecessary labour upon the professors, is an anomaly which should not be allowed to continue"—(*The Chairman*).—Question, That this paragraph be inserted in the proposed Report—put, and *agreed to.*

1346.

1350, 1352, &c. 1370. 1958, 1959, &c.

1959-1960. 3184.

3172, &c. 3189, 3195.

3517, 3642.

Question, That this Report, as amended, be the Report of the Committee to the House—put, and *agreed to.*

Question, That the Resolutions agreed to, be reported to the House—put, and *agreed to.*

Question, That the Minutes of Evidence taken before the Committee, with Appendix, be reported to the House—put, and *agreed to.*

Ordered to Report.

EXPENSES OF WITNESSES.

Name of Witness.	Profession or Condition.	From whence Summoned.	Number of Days Absent from Home, under Orders of Committee.	Expenses of Journey to London and back.	Allowance during Absence from Home.	TOTAL Expenses allowed to Witness.
				£. s. d	£. s. d.	£. s. d.
G. Woods Maunsell -	Barrister - -	Detained in town -	2	- -	6 6 -	6 6 -
John MacEvoy - -	Manufacturer -	Dublin - - -	7	5 - -	7 7 -	12 7 -
R. H. Scott - -	Lecturer - -	Ditto - - -	4	5 3 -	4 4 -	9 7 -
Dr. W. Barker - -	Medical - -	Ditto - - -	7	5 4 -	7 7 -	12 11 -
Sir R. Kane - -	- - -	Ditto - - -	18	5 3 6	18 18 -	24 1 6
Dr. W. E. Steele - -	Assistant Secretary, Royal Dublin Society.	Ditto - - -	18	5 10 -	18 18 -	24 8 -
Mr. F. J. Sidney -	Secretary to Committee of Lectures.	Ditto - - -	15	5 5 -	15 15 -	21 - -
Professor Jukes - -	Professor - -	Ditto - - -	5	5 5 -	5 5 -	10 10 -
Ditto - - -	- - -	Ditto - - -	4	5 4 -	4 4 -	9 8 -
Dr. W. E. Steele -	Assistant Secretary, Royal Dublin Society.	Ditto - - -	11	5 9 -	11 11 -	17 - -
Dr. Sullivan - -	Professor - -	Ditto - - -	10	5 5 -	10 10 -	15 15 -
Professor Galloway -	Professor - -	Ditto - - -	5	5 5 -	5 5 -	10 10 -
Dr. John Morgan -	Professor - -	Ditto - - -	12	5 5 -	12 12 -	17 17 -
Dr. E. P. Wright -	Professor - -	Ditto - - -	4	5 6 -	4 4 -	9 10 -
Dr. J. F. Waller -	Barrister - -	Ditto - - -	5	5 5 -	15 15 -	21 - -
Mr. William Andrews -	- - -	Ditto - - -	12	5 5 -	12 12 -	17 17 -
The Very Rev. C. Graves	D. D. - - -	Ditto - - -	8	5 12 -	8 8 -	14 - -
Sir William R. Wilde -	M. D. - - -	Ditto - - -	3	5 11 -	9 9 -	15 - -
Rev. J. H. Jellett -	- - -	Ditto - - -	8	5 12 -	8 8 -	14 - -
				Total - - - £.		282 7 6

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Lunæ, 25° *die Aprilis*, 1864.

MEMBERS PRESENT:

Mr. Cogan.	Mr. Lefroy.
Mr. Dillwyn.	Sir Colman O'Loghlen.
Mr. George.	Mr. O'Reilly.
Mr. Gregory.	Sir Robert Peel.
Sir Edward Grogan.	Mr. Waldron.
Mr. Leader.	Colonel Luke White.

MR. GREGORY, IN THE CHAIR.

GEORGE WOODS MAUNSELL, Esq., called in; and Examined.

G. W. Maunsell, Esq.
25 April 1864.

1. *Chairman.*] YOU are Honorary Secretary to the Royal Dublin Society?—Yes.

2. As such, I presume, you are well acquainted with its history, its constitution, and its functions?—Yes.

3. The Royal Dublin Society was formed in 1731, as a private society, and it so remained till 1749, when it received a charter from George the Second?—Yes.

4. That charter incorporated the Dublin Society for the purpose of improving husbandry and other useful arts?—The words of the charter of 1749 are "for promoting husbandry and other useful arts in our kingdom."

5. In 1820 it received the additional title of "Royal" Dublin Society, on the accession of George the Fourth?—I think so.

6. In 1749 it received an annual grant from the Privy Purse of 500 *l.*?—Yes; the grant has varied at different periods of its history. I have not brought with me the amounts of the early grants, because they were variable and uncertain.

7. Then the Irish Parliament voted various sums of 5,000 *l.* and 10,000 *l.* Irish at different times to the Society?—Yes.

8. A farming society was attached to it to which 5,000 *l.* per annum was granted, but that was given up before the year 1800?—The Farming Society was an independent institution. When it was abolished its duties were taken up by the Royal Dublin Society. I am not aware that there was any transfer by Parliament of funds from the one to the other.

9. At first the Royal Dublin Society was an agricultural society, and a society for the encouragement of arts and manufactures?—Yes.

10. And the Irish Legislature gave them the management of the silk, woollen, leather, and paper trades, the regulation of workmens' wages, and many functions of that description?—There were various functions undertaken by the Society in its early history, interference in which, by any public department, has been long since given up and exploded.

11. In 1785. did the Irish Legislature direct the Royal Dublin Society to form drawing schools?—Yes; by the 25th Geo. 3, c. 61, drawing schools were connected with the Royal Dublin Society.

12. In 1790 did they form the Botanic Gardens?—By the 30th of Geo. 3, c. 61, the Botanic Gardens were placed in connection with them.

13. In 1792 was there a recommendation that they should turn their attention to mineralogy?—Yes, there was the collection of a gentleman of European celebrity, the Leskean Collection to be sold, and the Act of the 32d Geo. 3, c. 14, associated that department as a museum with the Royal Dublin Society.

14. Is it the fact that during the last 16 years of the last century the Irish Parliament voted altogether the sum of about 100,000 *l.* for the support of the Royal Dublin Society?—I have not taken the earlier sums, because they were uncertain in date, and uncertain in amount.

15. After the Union, the Royal Dublin Society received 10,000 *l* for the first 20 years?—£. 10,000 Irish, from 1801 to 1819.

16. That was reduced to 7,000 *l.* in 1820, was not it?—From 1819 to 1830 the annual grants varied in amount; the average was about 7,000 *l.* a year.

17. Then that was reduced, was it not?—The sum was fixed at 5,500 *l.* about the year 1853,

G. W. Maunsell, Esq.

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and the grant has remained at that amount, for purposes purely connected with the Society; but for convenience in carrying the vote a sum of 500 *l.* a year, which is merely received by us for the purpose of transmission to the Zoological Society, is included in our estimate; but we exercise no control whatsoever over it, either before or after receiving it.

18. What is the estimate for the present year for the Royal Dublin Society?—The sum which we have received is 5,500 *l.* for our several departments; repairs of buildings are under the control of the Board of Works; that is a sum of uncertain amount, but always small; I cannot state the precise amount.

19. Is 5,500 *l.* the whole amount that is voted in the Estimates for this year for the Royal Dublin Society?—I have not before me the Estimates for the current year.

20. Are you aware what was the gross amount of public money that was voted to the Society from the commencement of the century up to 1830?—I have read it in the Report as 276,000 *l.*

21. Are you aware of the amount of private subscriptions from 1800 to 1830; am I right in saying that it was 19,308 *l.*?—Yes.

22. Then the ratio of the proportion of public money to private subscription would be 14 to 1?—Yes.

23. Latterly has not the ratio of public grants to private subscriptions been reduced to about 10 to 1?—The private subscriptions are considerably in excess of that proportion; the average private subscriptions now are 1,300 *l.* a year, exclusive of miscellaneous receipts, special subscriptions and receipts from cattle shows.

24. The present subscription is two guineas per annum, with an entrance fee of three guineas, is it not?—There are two classes of members: there are those who are life members, who pay a composition of 20 guineas, and the annual members who pay three guineas entrance, and two guineas a year.

25. As regards the constitution of the Royal Dublin Society the Lord Lieutenant is always the president, is he not?—Yes.

26. And you have seven vice-presidents?—Yes.

27. Who are usually personages of distinction?—They are so.

28. Have you a treasurer?—No; the Bank of Ireland is our treasurer.

29. You have two secretaries, have you not?—Yes.

30. And a registrar?—Yes.

31. There are three annual stated meetings for the election of officers of the Society, are there not?—Yes.

32. And there are weekly meetings during part of the year to receive the reports of the different standing committees?—There are weekly meetings of the Council; the proceedings of the Council come before the monthly meetings of the Society; and three of those monthly meetings are what are called stated or general meetings.

33. There was an alteration in the year 1836, with regard to the constitution of the Society, was there not?—Yes; up to that time the committees of the Society reported their transactions to the Society at large; it was considered advisable by the Parliamentary Committee, which sat in the year 1836, that there should be an Executive Council, which Council should consist partly of members elected from the general body, and partly of representatives from each standing committee; with the addition of the seven vice-presidents, and the honorary secretaries; making a total of 34.

34. The object of that recommendation by the Committee of 1836 was, I presume, in order that the Government might have some responsible body, as it were, to deal with in their relations with the Society?—It was so.

35. Since then, I believe, it has been found that the arrangement has not been perfectly satisfactory?—Objection has been taken to the arrangement from one or two incidents which arose in the course of proceedings in the Society, where the Society at large reversed decisions which had been come to by the Council. A letter on that subject, addressed to us by Mr. Lowe, representing the Department of Science and Art, pressed this objection, that where as the Executive Council of the Society got charge of all the public funds voted by Parliament, they were liable to have their views reversed after the money had been expended, without there being any power in the Government to correct what might be wrong, and the department recommended, therefore, that the Executive Council for the time being should be empowered to act with full authority, taking every care that that Executive Council should be, as much as possible, the reflex of the Society, and, in its election, the choice of the whole body at large.

36. Have there been any instances in which the general body of the Society have reversed the recommendations of the Council, in dealing with its officers?—There have been.

37. Have there been any instances in which the Council has recommended a certain course of proceeding in its dealings with the Government, and the Society at large has disapproved of the course taken by the Council?—I cannot call to mind any such case in dealings with the Government. There was a decision taken by the Society at large on the question of opening the Botanic Gardens on Sunday afternoon. In that case, no doubt, the views of the Government were expressed to the Society in favour of a particular course from which the Society dissented. On further consideration, the views pressed upon the Society by the Government were adopted.

38. Had the Council, in the first instance, been favourable to the opening of the gardens on Sundays?—I do not think the Council were called upon to pronounce any decision upon it, except so far as this, that the question had been twice, during the preceding 10 years, mooted in the Society at large, by independent members, and decisions had thereupon; and the Council's view was, that they should support the decisions already come to, until cause was shown for a different course.

39. Has not there been a proposal made by the Commission of Inquiry into the Royal Dublin Society, the Museum of Irish Industry, and the System of Scientific Instruction in Ireland in 1862, that additional strength should be given to the executive?—Yes.

40. Will you detail to the Committee what the alterations are that have been so recommended, and what is the course that has been pursued by the Society with regard to that recommendation?—That rather requires me to give shortly a detail, in consecutive order, of the various proceedings. In August 1861, a very carefully drawn memorandum was pressed upon the Government, praying

ing for aid to several departments which were in a very unfinished state. In December 1861, the Department of Science and Art sent over their officer, Captain Donelly, who investigated in detail all the several matters contained in the memoradum of August; and he made his report, which is in print, and which has been presented to the Houses of Parliament.

41. Sir *Edward Grogan.*] When was that report made?—It is dated the 11th of December 1861. In that Captain Donelly entered fully into all those several details; when the estimates for 1862 came on, a question arose in the House of Commons quite unexpectedly by the Society, on the propriety of consolidating the Royal Dublin Society with the Museum of Irish Industry; in that discussion Mr. Adderley expressed a very strong opinion in favour of a fusion. Mr. Lowe, who then represented the Department of Science and Art, took the same view. Up to that time, and indeed I may say at any time since, the Dublin Society have never interfered in any way whatsoever, directly or indirectly, in furtherance or promotion of that fusion, except so far as announcing their willingness to accept any responsibility, and discharge any duties that might be imposed upon them if the fusion took place. In consequence of the discussion which took place, to which I have alluded, a Commission was appointed by the Treasury, which Commission consisted of the Right Honourable Mr. Blackburne, Sir Charles Trevelyan, Sir Richard Griffith, and Captain Donelly. They came to Dublin and entered upon an investigation of the affairs of the two societies; they examined witnesses with regard to those defects of constitution to which you have referred; they went into a detail of the finances of the several departments for which assistance had been sought, that is, the Museum, the Library, the School of Art, the Botanic Garden, and the Agricultural Department. In the progress of their inquiry, they were made aware that in the year 1858, in pursuance of an Act of Parliament which had been passed in the year 1854, an agreement was come to by Sir Richard Griffith, as the chairman of the Building Trustees of the National Gallery, proposed to be erected in Dublin, and the honorary secretary of the Royal Dublin Society, for a grant to the National Gallery of a piece of ground upon which their premises have been since erected; the rent to be paid to the Royal Dublin Society was 100 *l.* a year; they proposed that that 100 *l.* a year should be capitalized by the payment to the Royal Dublin Society of a sum of 3,000 *l.*, which would go in aid of the departments requiring completion; and having gone into the details of the Museum, they recommended that the sum of 4,500 *l.* should be given to complete the Museum; that 1,000 *l.* should be given for purposes in connexion with the Library, and 1,000 *l.* for the Botanical Museum. Those sums made 9,500 *l.*, out of which might be taken the 100 *l.* a year, which the Society were giving up as the price of the 3,000 *l.* Part of the 3,000 *l.* was to be expended in purchasing a large and valuable yard adjoining the premises of the Society, and which was indispensable for their agricultural department. Subsequently, that yard has been acquired by the private guarantee of a few individuals, subject to any decision which may ultimately grow out of the Report of this Committee, or other proceedings in Parliament. In discussing the case of the Society, that Commission admitted the importance of the large constituency, of which the Dublin Society was composed, as inducing an interest in its proceedings all over the country, and in fact giving it weight in Ireland generally; and they dwelt upon the fact that its powers were insufficient as regarded its Council, and recommended, quoting the report which the Society had drawn up a few months before, that the Council for the time being should be vested with full executive authority, leaving it to the Society, if they were dissatisfied with any exercise of that authority, to displace them, and put others in their room; but that, for the time being, they should exercise full authority to treat with the Government on all questions of public grant or otherwise. And they gave their opinion, that in the event of those alterations being carried out, the Dublin Society might be as safely entrusted with the distribution of public funds as the British Museum, or the Trustees of the National Gallery, or any other important department responsible to Parliament in this country.

42. *Chairman.*] Do I understand you rightly, that by the new arrangement, which I think has been acceded to by the Royal Dublin Society, conditionally (I presume, upon its obtaining those grants from the Treasury), all future decisions of the Council will be binding upon the general body?—No doubt. The course adopted by the Society, when that report came over, was to call a meeting, and submit its recommendations to the Society at large. The first resolution proposed to be put before the Society was, a resolution approving of the report. Objection was then taken by other institutions in Dublin to a general grouping of the respective funds under one common grant, to be paid out through the medium of the Dublin Society. Objection was taken by the Royal Irish Academy, for instance, to that part of the report; and our attention being called to it, an alteration was made in the terms of the resolution, and it was laid before the Society in this form; that the Society accepted the report of the Commissioners so far as it applied to the Royal Dublin Society; and secondly, that they should appoint a Committee on the spot, to carry out the matters which they the Commissioners thought should be revised in their charter. That resolution was carried, I think, unanimously, and the committee was appointed, and proceeded to revise the charter; previously to so doing, a deputation came over here, and waited on the Science and Art Department, in order that we might have precisely from them the views of the Government with respect to that charter. After that deputation returned to Ireland they entered upon a discussion of the charter, and a meeting was called in the month of July 1863, to approve of the charter, which, having been at first revised, had been submitted to the Council, and approved of by them. The notice of meeting was issued on the 17th of July 1863, asking the Society to assemble on the 27th of July to approve of that charter. On the 25th of July the Society received a letter, dated the day before, from Mr. George Alexander Hamilton, Secretary to the Treasury, asking that all proceedings with respect to the revised charter, and other matters connected with it, should be suspended for reasons I have no occasion now to mention; that the Government had determined to give a further inquiry

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quiry with regard to the matters recommended by the Treasury Commissioners of 1862, and that meanwhile nothing should be done.

43. Do you consider that the Society has definitely changed the constitution of its Council, irrespective of its obtaining this increased grant from the Treasury, or do you consider that the one arrangement is dependent upon the other?—The Society have fully assented to the change in the charter, because, when Mr. Hamilton's letter was read asking us to postpone all further action, a resolution was come to which declared that the Society, in postponing all further action in submission to the wishes of the Treasury, adhered to the resolution already come to, that the charter required alteration and amendment, and that it would be taken up at the proper time.

44. Is the Council at this moment in possession of plenary powers as recommended by the Commission?—They are not. The action of the Society was suspended by Mr. Hamilton's letter of the 24th of July, and the matter remains where it was; there is, first, a resolution passed on the 17th of June, approving of a change, and recommending a revision of the charter. There is then a further resolution of the 27th of July, reiterating the determination to carry out the views of the Government, but suspending action, in consequence of the letter I have referred to.

45. I presume that the suspension of action on the part of the Government is owing to no decision having been arrived at as regards the amalgamation of the Royal Irish Museum with the Society?—We thought it exceedingly hard upon the Society. We did not wish to mix up the question of the Royal Dublin Society with any question about the continuance or non-continuance of other institutions, but we thought that we had laid ground by successive statements and by the result of successive inquiries for the sum of money we sought for. The money was promised to us. Mr. Frederick Peel wrote a letter to us (which letter has been presented to Parliament), stating that, in the event of our acceding to the suggestions contained in the Treasury Commissioners' Report of 1862, the Government was prepared to recommend to Parliament a grant to us of the several sums I have named; and yet, when we had assented to those suggestions, when we had appointed a committee for the revision of our charter, and called a meeting to confirm that revised charter, we got a letter from the Treasury asking us to suspend the whole matter. When it came to the month of November, and we were obliged to present an estimate for this present Session of Parliament, thinking we had carried out in good faith all the requirements of the Government, we presented an estimate which included the 9,500 *l.* In due course we got a letter from the Department of Science and Art, stating that while these matters were under consideration they could not alter the grant as made in former years, thus hanging up all the requirements of our Library, our Museum, our Agricultural Department, and our Botanical Gardens, in consequence of a discussion which had arisen on purely collateral institutions.

45*. Does the Treasury, in that communication, call upon you to suspend all action upon your own part, or does it merely intimate to you that it has suspended for the present all action on its part?—As I read the language of the secretary's letter, it requests that our proceedings should be suspended till the decision of Parliament shall be taken on the union of the two institutions.

46. Will you read Mr. Hamilton's letter?—"24th July 1863. My Lords and Gentlemen, I am directed by the Lords Commissioners of Her Majesty's Treasury to acquaint you, that, in consequence of a representation made by a number of Irish Members of Parliament that the recommendations of the Commissions regarding the Royal Dublin Society and the Museum of Irish Industry should not be carried into effect until an opportunity should be afforded to Parliament of fully discussing and deciding upon them, my Lords have decided that the union of the two institutions shall not be carried into effect without opportunity for further inquiry, nor before Parliament shall meet next Session. I am therefore to request that any further proceedings which may be taken in the matter may be suspended."

47. Do you read that as a recommendation to the Society not to carry out their revision of the Council?—I do not read it in that way. I merely read it as an order to us to suspend our proceedings.

48. The revision of the Council is, in fact, your only proceeding, is it not?—Yes. As far as I am informed of the wishes of the Society, it is their anxious desire that the matters placed in suspense should be concluded.

49. Do you consider that, when the authority of the Council is thus strengthened, it will be in an analogous position to that of the Trustees of the British Museum?—I am not aware of the powers vested in the Trustees of the British Museum; but such is the language of the Department of Science and Art, as applied to the state of things that would exist.

50. I think the Commissioners express themselves thus:—"That when the constitution of the Council has been improved in the manner proposed, the Royal Dublin Society may be entrusted with the disbursement of grants of Parliament with as much confidence as the Trustees of the British Museum"?—Yes. I should state, in connection with that, that when we sent in our estimate, we accompanied it with a very strong representation indeed, in the shape of a memorial, signed by about 3,000 of the first peers and commoners and gentry of Ireland, praying the Government to support us by that grant. We asked the Lord Lieutenant, as our President, to forward that to the Department of Science and Art in London. The answer of the Lord Lieutenant was, that in the face of a letter which requested that nothing should be done pending the inquiry, he did not think that it was right to forward it; but the letter written to us by Sir Thomas Larcom, under his Excellency's direction, contains a passage which I should wish to read to the Committee.

51. What is the date of that letter?—The 5th of January 1864:—"I am to add, however, that his Excellency has heretofore considered the application for the grant in question of 9,500 *l.*, for completing the arrangements and fitments of the Royal Dublin Society as resting on its own admitted necessity, and regrets that it should have been made in any way dependent on the arrangements of another institution, thereby rendering the application at this moment inopportune."

52. You have stated that one of the results of the recommendations of the Committee of 1836 was the creation of the Council; were the evening meetings for the discussion of scientific subjects,

jects also a result of the recommendations of that Report?—Yes.

53. And also the lectures in provincial towns?—Yes; the Committee of 1836 made a variety of specific recommendations; every one of which I believe, except one or two matters of minor detail, which altered circumstances have rendered unnecessary, have been carried out. They recommended first, that the property should be declared to be held in trust for the public, and to be public property exclusively; that has been assented to by resolution. They recommended an alteration of the ballot; the Society admits its members by ballot; there was an idea on the minds of some gentlemen that the ballot was used for the purpose of exclusion. It is a matter known from that Report, that there were one or two instances of exclusions, very much to be condemned and regretted. It appeared, however, that the exclusions by ballot from the year 1800 to the year 1836, had amounted to four persons; since the year 1836 I have caused inquiry to be made, and I find that two persons have been excluded. The opinion of the Committee of 1836 was, that the rule of admission by ballot should be retained, but that no person should be excluded by such ballot, unless 40 persons voted in the negative. The ballot has worked satistactorily in every way since. They recommended the creation of a Council; that has been carried out. They recommended the adoption of the system of provincial lectures; that has been carried out. They recommended that the Museum should afford greater facilities to the public; that also has been carried out. They recommended that the Library should give greater facilities; that also has been carried out, and carried out even more fully than is generally the case elsewhere: the Library being now open for three evenings in the week, from 7 till 9; and the anxiety of the Council and Society is to open it every evening, except Sunday; they have only been restrained from so doing by absolute poverty; the means of the Society being so scanty that the Council have been obliged to call the attention of the Library Committee to the quantity of gas used in lighting that room for the benefit of the public readers. I hold in my hand a return which I have received this morning from the librarian of the Royal Dublin Society, in which he states that the number of readers in our library last year was 19,000; and from the commencement of this year up to the last date when he made up his return, viz., April 23d, the number of readers was 6,056. He adds statistics of the number of volumes, which I need not go into at this moment; I may say, however, that he states the number of sets of books in 1848–9 as 5,770; in 1856 they had increased to 8,405, making, as nearly as we can approximate it, from 35,000 to 40,000 volumes. The Library is open to the public upon a recommendation from any member of the Society, stating that the person applying for admission is a person who is known to him.

54. You mentioned that the Committee of 1836 recommended that in future grants it should be understood that the property was to be considered public property. The Treasury agreed to renew the annual grant upon the understanding that the whole Society's property should be declared public, and held in trust by the Society for the purposes they professed to carry out?—Yes.

55. That arose in consequence of the Royal Dublin Society asserting at one time, that Leinster House was purchased with their own money?—They did so assert it, and it was the fact; but some of the members of the Society were of opinion that that gave them a private right which the feeling of the present day would never think of sanctioning, nor would the Society now assert it.

56. Leinster House was purchased in the year 1814 for 20,000 *l.*?—Yes.

57. The lease was taken from Lord Fitzwilliam, of Leinster Lawn, at the same rate as the Duke of Leinster had paid for it, 300 *l.* per annum?—Yes.

58. £. 5,000 of the 20,000 *l.* was paid down, and the rest was paid, interest and principal, by instalments, till the whole was completed, in the year 1837?—Yes.

59. Would the whole amount of the private subscriptions of the Royal Dublin Society, from the date of the purchase of Leinster House up to the year 1837, have paid the whole of the principal, together with the interest?—I cannot say that I have ever seen the mode by which the 20,000 *l.* was discharged, but no application was made to Parliament for aid in discharging it.

60. What is the present position of Leinster Lawn; do you consider it to be held in trust for the public?—Certainly.

61. Has there been an application, or is there any desire on the part of the citizens of Dublin, that it should be more open to the public than it is at present?—I have not so heard it stated. At present, to throw it more open would be accompanied with some difficulty. The premises of our Museum, in consequence of some of these very requirements, were so unprotected, there being no window shutters, that some thieves broke in and opened one of our cases, and took out some of our more valuable specimens of minerals; they were afterwards recovered, and the thieves were prosecuted. On their trial, the recorder stated that the Society had only to blame themselves for having their premises in such an unprotected state.

62. If there was a general feeling expressed on the part of the inhabitants of Dublin, that Leinster Hall should be more freely open to the public, would the only plea that the Royal Dublin Society would set up against such a proposition be, the inadequacy of their resources to protect their property from plunder or destruction?—I think they would probably put in two other pleas; first, that it would turn their premises into a thoroughfare from Merrion-square to Molesworth-street; and I think they would also make this natural objection, that while the members of the Society contribute annually their subscriptions towards its support, and their unpaid personal labours towards its management, the privileges they have as members are very few, scarcely any; the privileges they have are simply that of borrowing books from the Library, and the use of that lawn; no doubt that privilege would be pressed, and pressed more particularly by those who enjoy that lawn; they would feel that it was taking from them one of their few remaining privileges, and it would tend therefore to reduce the number of members; I for myself cannot say that I could anticipate that the Society would feel on that otherwise than as Parliament should wish, if any expression of the feeling of Parliament was offered.

63. The position of the Society in its bearings as a private society would in fact to some extent

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place it in antagonism with the wishes of the public in this respect?—I do not conceive that it would, I think it would take the same position as it did on the question of the opening of the Botanical Gardens on Sundays. That was a question on which religious feeling was strongly excited in Ireland, nevertheless the Society yielded at once, on the expression of the feeling of Parliament. I do not think the question is one on which any very strong feeling would be expressed by the members.

64. You have stated that one of the privileges of members of the Royal Dublin Society is, the power of borrowing books from the Library?—Yes, they have the power of borrowing one book at a time, except in the case of persons engaged in literary publications, who, upon special application to the Library committee, are empowered by their order to have two, three, or four books, as may be required.

65. How long can a member of the Royal Dublin Society keep a volume?—A fortnight.

66. Have there been any complaints made on the part of the public that they have been inconvenienced in their studies by books being away when they have wanted them?—I never heard of any.

67. Your Society is divided into eight departments, each being superintended by a committee?—Yes.

68. Each of them consisting of 11 members?—Yes, the eight committees being, agriculture, chemistry, library, natural history, botany, fine arts, manufactures and natural philosophy. If the recommendation of last year should be carried out they would be reduced to seven by the consolidation of the chemistry with the natural philosphy.

69. The committee of natural history takes within its scope geology, mineralogy, and zoology?—Yes.

70. And natural philosophy comprises mechanics?—I would rather that that part of the examination were left to some of my friends who are to follow me.

71. Who are the officers of the Society who receive salaries?—The only general officers that are paid are the assistant secretary and the registrar. In the departments they pay the librarian, they pay the curator of the Museum, they pay the curator of the Agricultural Museum, and they pay the curator of the Botanical Gardens; there are subordinates who are also paid.

72. They pay the masters of the Art School?—The Art School stands upon a separate footing altogether. The Art School has undergone various changes. It was grafted upon our Society by Act of Parliament, and so continued up to 1848. In 1848, Lord Clarendon being then Lord Lieutenant, it was resolved to carry into Ireland a branch of the Schools of Design that were then being established in this country, and that School of Design became grafted upon our school. A master and three assistant masters were appointed by the Government. After two or three years, two of the masters were withdrawn by the Department of Science and Art; and the master who had been appointed by the Government as the head of the school, from increasing years, lost some of the efficiency he might have had in former times, and the schools were represented in consequence to be not in a satisfactory state. The school comprises four departments, figure, landscape and ornament, architecture, and modelling. There were only two masters. Last year an arrangement which had been a matter of negociation for several years brought the then existing state of things to an end; the former master was superannuated, and two certificated masters were appointed, with the approval of the Department of Science and Art; and the schools are now working in the highest degree of efficiency; the fees, which do not quite meet the expenditure of the schools, are supplemented by aid from the Society.

73. Will you inform the Committee what are the relations at this present moment between the Royal Dublin Society and the School of Art?—The school was placed under the direction of the Council. The Council, who could not themselves take the special charge of the schools, delegated the management to the committee of fine arts. Thus, the committee of fine arts, acting as deputed by the Council, have the immediate charge of that school.

74. At the present moment, the whole direction of that school is carried on under the Science and Art Department, is it not?—Yes, they do not give us any money.

75. What jurisdiction, or what power has the fine arts committee of the Royal Dublin Society with regard to the School of Art, are they to be looked upon in the light of visitors?—I think they occupy the same position as is filled by local committees, whether it be in Birmingham or Cork, or anywhere else. They, in fact, have full control over the officers. The department would not recognise their pupils at examinations unless they were trained by certificated masters.

76. With regard to the lectures delivered at the Royal Dublin Society, those lectures are free, are they not?—They are. By the arrangement of 1854 the educational staff is made common to the Royal Dublin Society and the Museum of Irish Industry. The first part of each set of lectures, which is in the nature of a popular lecture, is delivered at the Royal Dublin Society, and is free. The second part, which assumes the form of a technical lecture, is delivered at the Museum of Irish Industry, and for that a fee is charged; I am not acquainted with the details. The delivery of free lectures has been always strongly urged by the Royal Dublin Society with the view of diffusing in the metropolis and the country a taste for science and art. In the Appendix to the Report of 1836 there is a very strong letter from a gentleman of the very highest eminence in Ireland, Sir William Hamilton, the Astronomer Royal, in which he strongly urges upon the Committee that the lectures delivered at the Royal Dublin Society should be free, and the recommendation of the Committee of 1836 was to the like effect, that those lectures should be free. The Committee which sat in the year 1829, on the Civil Service Estimates, having, on the contrary, recommended that those lectures should be open to the public only upon a payment of a fee.

77. At one time you had a professor of the veterinary art, with a forge attached, had you not?—Yes, that was after the Farming Society was abolished, and their functions were transferred over to us; it was speedily found that that professorship was not consistent with our line of operations, and it was discontinued. It has been discontinued more than 30 years.

78. Why was it not consistent with your line of operations?—At that time it was not very consistent

sistent with them; I think it might be very consistent with them at present; at that time it was not so considered.

79. There was also, at one time, a professor of mining and engineering?—Yes. The proposition made by the Treasury Commissioners was, that there should be two professors in connexion with agriculture and two in connexion with mining, who should be placed in connexion with the Dublin Society and that two other professorships should be discontinued. The two professorships which they wished to annex to the Royal Dublin Society, were for the improvement of agriculture, those of agricultural chemistry and botany. Those which they wished to annex with a view to the encouragement of mining industry were mineralogy and geology.

80. Is there a professor of mineralogy at present?—Yes; but the arrangement which took place in the year 1854 contemplated that, upon the death of that present professor, the professorship should not be continued.

81. What is the name of the present professor?—The present professor is Dr. Scouler. He is a very old man, and has long since ceased to perform any duties. He resides permanently in Scotland, and was, in fact, by part of the arrangement of 1854, allowed so to do, his salary being continued to be paid to him rather in the nature of a pension, with the understanding that his place should not be filled up. The attention of the Rev. Mr. Haughton, who has devoted a great deal of time to the arrangement of our Mineralogical Museum, was called very forcibly to the want that would be felt by the discontinuance of that professorship; and, very much by his efforts, Mr. Robert Scott, a mineralogist of the highest character, undertook to act as deputy, and is now giving lectures as such. We would press most earnestly that those professorships should be continued; we think they are very essential, both for the country at large and for the operations of the Society.

82. When you say "those professorships," do you mean the professors of chemistry and mineralogy?—We should wish to have associated with us the professorships of agricultural chemistry, and botany as connected with agriculture; and, with regard to mining, we should like to have mineralogical and geological professorships.

83. Do you think it absolutely essential that the Society should have an agricultural chemist attached to it?—Yes.

84. Has not the Royal Agricultural Society a chemist attached to it?—Yes; but he is only open for analysis on payment of fees.

85. There are two professors of chemistry at Stephen's Green, are there not?—There are.

86. Do you think it, therefore, necessary to have a fourth professor of chemistry in Dublin?—Yes; for this reason. One of the most important departments of the Royal Dublin Society is its Agricultural Department, and it is increasing in importance. References are constantly coming before us, more especially within the last 10 or 15 years, upon the subject of artificial manures and soils, and other things which call for a continuance of that branch in connexion with us.

87. Analyses of soils and manures could be done, I presume, by the chemist attached to the Royal Agricultural Society, could they not?—Yes; but the Royal Agricultural Society's operations in Dublin are very scant indeed; in point of fact, the Royal Agricultural Society confines itself practically to the provinces, because it conceives that the Royal Dublin Society addresses itself to the metropolis. The Royal Agricultural Society has never held a show in Dublin during the 20 years it has been in existence, because it thinks that the field is taken possession of by the Royal Dublin Society; and it finds considerable difficulties now in holding its provincial shows, from the great increase of local farming societies, which local farming societies are much more likely to refer questions to us than to the Royal Agricultural Society.

88. Dr. Apjohn is the chemist attached to the Royal Agricultural Society, is he not?—Yes; a chemist of a very high character.

89. Will you put in the names and dates of appointment, and the salaries of the different professors connected with the Royal Dublin Society, from the beginning of the present century up to the present day?—(*The Witness handed in the same. Vide* Appendix).

90. Will you state to the Committee the requirements of the Society under their separate heads, and the grounds upon which those requirements have been made to the Treasury?—The first requirement is that of the Museum of Natural History and Mineralogy. The Museum building is at present, to a great extent, a shell; it was built one half by Parliament, and the other half by private subscription of the members; in fact, for several years, the admission money of the members was set apart to create a fund to build a new Museum. When the Government took possession of the premises, built with the intention of forming a Museum, they obliged us to build upon Leinster Lawn; that greatly increased the expense, because it made it necessary for the Society to erect a very costly building, suitable in architecture to the position of the Society, out of their own funds; and, by dint of great economy, they were able to contribute 6,000 *l.* The Government contributed, in three separate grants, 5,800 *l.*, and they have since contributed something in the way of fittings. The Museum consists of two floors, and up to this year the basement was the bare ground, there being no floor whatsoever, and numbers of valuable specimens of the larger classes were being lost and injured in that unfinished room. The upper floor, which is devoted to natural history and mineralogy, has three galleries, or rather two galleries and its own floor. The contemplation of the design was that glass cases should go all round that Museum on its several galleries and floor; those are not yet supplied, and many boxes, containing most valuable donations from foreign contributors, are lying packed-up unopened, and some have absolutely perished and been lost from that state of things. An estimate has been made for the Museum, and the calculation is that, with the greatest possible economy, the cases and other matters required to set out the specimens would involve the sum of 4,500 *l.*: that is rather less than we had estimated as our requirements, but I name it as the sum which was added to by Sir Charles Trevelyan and the Treasury Commissioners; they admitted the necessity of 4,500 *l.* Coming next to the Library: by the removal of the specimens from what were formerly the museum rooms, five different rooms have been made available for the use of the Library; not one of those rooms is furnished with shelves. We have many thousands of valuable books not only stowed away in our attics, but they are

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absolutely lying in piles between the timber framing of the roof, where I had the honour to conduct Lord Granville on one occasion, when he visited us; and he had to pick his way, as best he could, through the king-posts and principals of the framing, to see the fact himself, that we had there thousands of volumes utterly inaccessible, even to members: as to saying that the members could get at them, it would be utterly hopeless. The building presents a very long façade, one principal room being devoted to the readers; and the room appropriated for the readers will, when the other rooms are taken into use, stand between what is now the present Library and the new rooms, the readers occupying the central room, which will be most convenient in every way. On examining the plan you see, next the present large Library, there is a room set apart for the advantage and benefit of readers, both in the evening and in the day; the rooms beyond that, lying south of that, are now unfurnished with shelves, and what we would respectfully ask the Committee, is to recommend the grant to us of such means as will enable us to shelve those rooms. I may mention that within the last year the Society have received from one gentleman a present of a library, which is valued at many thousand pounds, a collection of very valuable works; and they have received it upon the condition that they be kept together as the Joly Library. Those rooms are being fitted up very slowly for want of funds; and if Parliament would enable us to complete the shelving required for those two rooms, we venture to submit that we should have the most generally useful public library in Ireland, and probably I might go even further.

91. What is the principle of admission to the Library?—Simply a certificate from any member that the person is respectable and proper to be entrusted with the privilege. The usage in London is, I believe, that two householders should certify. In Dublin it is analogous to that; it is merely a certificate signed by any member, which can be easily obtained.

92. Is there any desire manifested that there should be an alteration with regard to the mode of admission, by allowing persons to be admitted on the introduction of some well-known and respectable citizen of Dublin, though not a member of the Society?—I have not heard such a desire expressed. I do not think it possible, from the number of members (comprising every class in Dublin), that there can be the slightest difficulty in obtaining introductions; but if, instead of certificates signed by members of the Society, a recommendation signed by a householder were suggested, I see no very important principle involved in it. Up to this time I have never heard of any respectable person having the slightest difficulty in procuring admission to the reading-room.

93. Mr. *Waldron.*] What is the value of Dr. Joly's collection?— Several thousand pounds; I think 10,000 volumes will be added by Dr. Joly's collection.

94. *Chairman.*] Will you state what amount is estimated as being required to put the Library into proper condition?—The estimate which passed the approval of Sir Charles Trevelyan was 1,000 *l.* I should myself, from having a considerable library, and knowing something of shelving, have thought the sum wholly inadequate, from what I know of the immense collection which is to be shelved.

95. What is the name of your librarian?—Mr. Colles.

96. Has he made any calculation as to what amount would be required?—I do not think he has.

97. The Commissioners went upon his statement, I presume, in naming 1,000 *l.*?—I think the Library Committee wanted 1,500 *l.*, but, from a feeling that it would be impossible to press for such a large grant, it was restricted to 1,000 *l.*

98. Will you proceed with the requirements?—Passing from that to the Agricultural Department. For many years the Agricultural Department has been increasing in importance, and in the number of animals and the quantity of farming machinery which has been exhibited. Some years ago an effort was made by private whip in the Society, among those who were friendly to agricultural exhibitions, to get up a fund to roof over what was the old stableyard of Leinster House; that was done at an expense of 4,800 *l.* In the course of two years after it was built, an exhibition of Irish manufactures took place there, under a guarantee contributed by private individuals. One of the necessities of that exhibition was the erection of galleries; they were erected with funds collected in that exhibition, and they are now increasing the value of that agricultural hall by about 1,000 *l.* more; notwithstanding that, the premises were found to be entirely inadequate, and the exhibitors of farming machinery objected to having their valuable inplements and machinery put out upon the lawn in temporary wooden sheds, where they were very much exposed to the weather. A proposition was then made that we should purchase a yard, called Shelburne Yard, annexed to our premises, for the purpose of extending the grounds available for agricultural exhibitions; and, with a view to our acquisition of that yard, we offered to commute the rent which it had been agreed we should get from the National Gallery (of 100 *l.* a year) for a sum of 3,000 *l.*, which would enable us to purchase that and roof it over. It was all-important that the ground should not pass away while Parliament was making up its mind, and, accordingly, a number of private individuals joined in a guarantee, upon which money has been borrowed, and that yard has been sold to those private owners in trust: for, whatever may be the result, in the event of the funds not being forthcoming, they must hold it as private property. An exhibition is now in course of progress there, for exhibiting machinery in motion; the yard was to come in use, and it was necessary for that purpose that a roof should be put over it, and that roof has been contracted for by the Exhibition Committee for a sum of 1,200 *l.* The Society are anxious that that roof, of iron and glass of the best construction, should be preserved; and what we would respectfully ask from the hands of this Committee is, a recommendation enabling us to take upon ourselves the purchase of the yard and to retain the roof, which the contractor has liberty either to leave or take away at the termination of this exhibition. The shows of the Agricultural Society are becoming most important in their influence on the improvement of agriculture in Ireland, and they are attended by the gentry from all parts of the country, and the farming machinery there exhibited is gradually finding its way into every part of

of Ireland. We think it is very important, viewing Ireland as having its principal resource in farming operations, that every scope should be given to extend the benefits of those farming shows: and with that view the sum of 3,000 *l.* is asked for. As an inducement to grant that, we propose to commute our rent of 100 *l.* a year.

99. Have you opened negotiations with the Treasury upon that subject?—I think we have been knocking at the doors of the Treasury for the last five years upon the subject.

100. I refer particularly to the proposition of commuting your rent of 100 *l.* a year into a sum of 3,000 *l.*?—Yes, we have made that offer.

101. What reply have you received?—The reply is, that it will be taken as a whole and considered in connexion with other applications.

102. The National Gallery owes at this moment several years' rent, does it not?—They have never paid us anything; they made an agreement to pay us 100 *l.* a year. It will be in the recollection of most of the Members of the Committee, that formerly a sunk fence with an old and unseemly wall divided the lawn from Merrion-square. On the faith of 700 *l.* now due to us by the National Gallery, who have never paid their rent, we have erected a railing of very great beauty along Merrion-square, which cost us, with the gates and piers, 900 *l.*; we have had to pay that out of the subscriptions of the members, which, in fact, has left that fund utterly bankrupt.

103. I presume you do not expect to get much from the National Gallery?—Yes, we do.

104. How?—We have the power of distress, and I believe, likewise, we have the power of ejectment; in fact, it was proposed several times at meetings of our Society, that the National Gallery should be served with notice to quit as ordinary tenants; but with the wish to preserve the good feeling which has always existed between the Dublin Society and other institutions, we always felt it would come right in the end, and that we should get that money, though there might be difficulties in getting it regularly in the first instance.

105. Do I understand you to say that none of the public money has been spent upon this agricultural hall, but that it has been erected wholly by private subscriptions?—Yes; there were a number of gentlemen connected with the Agricultural Committee who used to walk round the shows with a little pocket book, impressing upon each member that he could not give them less than 5 *l.*, and probably he would give them more towards this fund they were creating; and the fund was collected in that way.

106. I presume that that mode of obtaining assistance is now rather difficult to be carried on?—Considering that we have had to go to our members for nearly everything the last 10 years, and ask them for special subscriptions and special guarantees, I think we can hardly anticipate that we could get anything more.

107. Is 3,000 *l.* all that you require for your Agricultural Department?—For our Agricultural Department we are restricted by the Treasury Commissioners to 3,000 *l.* I do not mean to say at all that that comes up to the requirements; I think the importance of that department cannot be overrated. When it is borne in mind by this Committee that the grants which we are receiving now from Parliament for these important objects are only about half what we got for the first 20 years of this century, I hope the Committee will think that we are not exigeant in asking not only for the 3,000 *l.*, but for increased annual means of holding their agricultural shows. The Royal Dublin Society's shows were the first that were held in this country, and they have grown from trifling beginnings to prodigious shows. The introduction of the railway system makes a show now in Dublin, which was formerly a local matter, a matter of importance and interest for the whole of Ireland; prizes are taken for animals from all parts. I think last year Sir Frederick Heygate, the Member for Londonderry, got the first prize; this year the first prize has gone to Mr. Talbot Crosbie, of the county of Kerry. Mr. Meade, of Cork, has also carried away a prize, and a prize has gone to Tipperary also. The prizes for animals exhibited are therefore tending to improve the stock in every part of Ireland. The following paragraph has been put in my hand from the report of the Royal Dublin Society in the year 1856:—"It will be seen by the above abstract that 192 head of shorthorned breeding stock were exhibited at the Royal Dublin Society's late spring show more than at the Agricultural Society of England, at Chelmsford: 190 head more than were shown at the Highland and Agricultural Society of Scotland, at Inverness; and 167 more than were exhibited at the show of the Royal Agricultural Improvement Society of Ireland, at Athlone, or 15 head of similar stock more than were exhibited collectively at the three principal shows of the United Kingdom held during the year 1856." What I have said of animals applies with greater force with respect to the small farmer, who has the opportunity of seeing the improvements brought about year after year in agricultural implements.

108. Did I rightly understand you to say that you would require 1,200 *l.* for the roof in Shelburne Yard?—That is the contract price at which it is being put up. There is a clause which the committee have put in the contract, that they shall be at liberty to take it or give it over to the contractors upon the terms named. I think that it would come to the Society at a net cost of about 1,000 *l.* It has been put up very cheaply by an Irish firm.

109. Do you include that in the 3,000 *l.*?—No.

110. How much do you require for the Museum?—We are limiting the application to 4,500 *l.* The sum named for the Library has been fixed by the Treasury Commissioners at 1,000 *l.* We would ask to make it more, in consideration of our having received a very large donation of something like 10,000 volumes. We then would ask that the Committee would recommend that we should have 3,000 *l.* for the purchase of that valuable property in Shelburne Yard.

111. Colonel *White.*] Will Shelburne Yard hold all the agricultural implements generally shown there, or likely to be shown?—We have another yard on the other side, which would be also available.

112. *Chairman.*] As regards the Botanical Gardens, what are the requirements?—There is an absolute want of a museum.

113. For a *hortussiccus*, as at Kew?—Yes; such a museum as has been erected at Kew would, I need not say, more than come up to our desires; our gardens at Glasnevin have been always looked upon as the most beautiful in the kingdom in their arrangements. The number of

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visitors now exceeds what probably anyone could have imagined. During the last year the number of visitors to those gardens has exceeded 200,000 persons. I have prepared a memorandum showing the number of persons who have visited the different departments of the Royal Dublin Society for ten years. For the five years from 1854 to 1858 the average was 125,000; for the five years ending 1863, the average was 245,000, being very nearly double. There is a gradual increase, and if the Committee would give us the means to open our Library every night in the week, it would be a great boon to the class who would avail themselves of it. You may imagine how closely run we are for want of funds when, for the want of gas and the wages of one attendant, which would enable us to make that Library available for three days more for the class who most of all require it, namely, those who come to read there in the evening, we have been obliged to restrict it to three days. With regard to the Botanical Gardens we ask only 1,000 *l.*; but I would rather that Dr. Steele, who is more conversant with that head, were allowed to give evidence upon it.

114. It is also proposed, is it not, that there should be a professor attached to the Botanic Gardens?—Yes, a professor of botany. The professor of botany is still existing, and he gives his lectures partly at our society and partly at Stephen's Green. This is a pencil sketch of the Palm House which has been erected in our Botanical Gardens (*producing it*).

115. Is any portion of this sum which you require for the Botanical Gardens in consequence of widening walks or passages in the greenhouses in consequence of the increased influx of visitors?—I do not think so. The increase of visitors practically obliges us to close the gardens one day when they are open on an admission at a fee of 6 *d.*; but it is rather for the purpose of cleaning. The gardens require a good deal more attention from the vast influx of visitors.

116. Does the Royal Dublin Society attach any value to the 500 *l.* per annum granted to the Zoological Society being included in its estimate?—Not the slightest; we think we suffer from it, because I have constantly heard it stated that we are receiving 6,000 *l.* a year. The fact is, we are receiving 5,500 *l.* a year, and we get the credit of the other 500 *l.*, which we have not the spending of.

117. You do not think there would be any objection on the part of the Royal Dublin Society if that sum were removed from their estimate?—I should say none whatever. I have always understood that the suggestion which emanated from the Treasury Commissioners, of affiliating all the societies, the Royal Irish Academy, the Hibernian Academy, and others which receive Parliamentary aid, was entirely with a view to facilitate the passing through Parliament of a single vote instead of a number of successive small votes.

118. Sir *Edward Grogan.*] You were asked the amount of subscriptions and the amount of grant up to 1830; would there be any difficulty in continuing that Return from 1830 up to the present date?—I think such a Return has been made to Parliament.

119. Is that the Paper you refer to (*handing a Paper to the Witness*)?—Yes.

120. Will you state the amount which the Dublin Society had granted to it?—Last year it is 6,000 *l.*; the year before, it is 6,000 *l.*; those are public grants.

121. Do those grants include the 500 *l.* a year applicable to the Zoological Department?—Yes.

122. Accordingly, the yearly grant to the Dublin Society for its purposes is only 5,500 *l.*?—Just so.

123. What is the amount set down as private subscriptions of members and friends?—The private subscriptions when this return was made (in 1860) was very large. They are put down as 6,198 *l.*; that included the special collection I mentioned to the chairman, as being made from the members for the building of the agricultural hall.

124. You mean that that amount of 6,000 *l.* for that particular year, is not to be taken as the general annual subscription of members and friends of the Society?—No.

125. The general average being, as you have stated, about 1,300 *l.* a year?—Yes.

126. Mr. *George.*] What is the amount received from the shows?—The amount received from the shows is about 1,500 *l.* a year.

127. Sir *Edward Grogan.*] In the Paper in your hand, a comparison is instituted between Parliamentary grants to the Dublin Society, and Parliamentary grants to a variety of analagous institutions in this country, and also between the subscriptions raised in respect of each of those institutions. Do you find the private subscriptions in aid of any of those institutions supported by Parliamentary grants, at all comparable to those of the Royal Dublin Society?—No.

128. Will you mention the largest amount of private subscriptions in aid of Government grant in any of those institutions?—The largest I find is a sum spread over ten years, consisting of fees and subscriptions in respect of the Natural History and Industrial Museum at Edinburgh. I may take them in order. Last year the grant to the British Museum was 100,000 *l.* They received from private sources 1,833 *l.* The National Gallery received from Parliament in the last year 11,000 *l.*, from private contribution nothing. The Royal Gardens at Kew received from Parliament 14,800 *l.*, from private contributions nothing. The Botanic Gardens at Edinburgh received a grant of 1,200 *l.*; and they received by vote from the Scottish University, 627 *l.*, and from the Town Council of Edinburgh, 25 *l.* The Natural History and Industrial Museum of Edinburgh received from Parliament 1,943 *l.*, and they lump into one sum their private funds received for 10 years, 1,500 *l.*, which would average 150 *l.* a year. The National Gallery of Dublin has received grants not annually but irregularly. The last grant they received was 5,000 *l.*, but in 1859 they had received from a private collection in Dublin a sum of 5,000 *l.* They have also received, in subscriptions and donations, without specifying the years, 1,440 *l.* The Museum of Irish Industry received from Parliament in the last year 4,996 *l.*, and from private funds 58 *l.* I may state that the matter to which the question points is one which has at all times excited a great amount of dissatisfaction in Ireland, not that we grudge to the great imperial institutions the sums that are granted to them, but it has always been thrust in our teeth, What do you get from private subscriptions? It is urged in every possible way in Dublin, that if Dublin is to be viewed as the metropolis, it is entitled to at least a moderate share of the public funds bestowed

bestowed upon institutions which go to promote cultivation and spread a taste for science and a love of the arts. We think we have had scant justice compared with public departments in the metropolis, though we do not desire at all to take anything from them.

129. *Chairman.*] With regard to private subscriptions, have they been increasing, or have they been decreasing, within the last few years?—It is a remarkable fact, that whenever there has been any interference by the Government, our private subscriptions have rather decreased. When we are allowed to go on quietly, I think our private subscriptions would show an average of about 1,300 *l.* to 1,400 *l.* a year. In the year 1854, there was an impression on the minds of residents in Dublin, that the Government were about to take from the members all privileges whatsoever, and the private income in the year 1855 fell off to 769 *l.*

130. Sir *Edward Grogan.*] What had it been the previous year?—£. 1,484.

131. What was it the year before that?—£. 1,772.; but that year was exceptional, because it was the year in which the Irish Exhibition was held upon Leinster Lawn; and it might therefore have attracted a greater number. In 1859 it was 1,541 *l.*; in 1860 it was 1,260 *l.*; in 1861 it was 1,234 *l.*; in 1862 it was 1,346 *l.*, and then arose one of those cases in which it was supposed there would be an interference; and in 1863 it fell to 1,056 *l.* Last year, the year ending in March 1864, it was 1,351 *l.*

132. *Chairman.*] Did that diminution arise, do you think, in consequence of the Government interfering with the Society?—In the year 1854, certainly; I do not know that that could be said of last year.

133. Did the private subscriptions fall off in consequence of the feeling of the Government as regards opening the gardens on Sundays?—I should say not. [*The Witness handed in a Paper, specifying the amounts of Members' Subscriptions in different years.—Vide* Appendix, Paper (B).] I hold in my hand a Table, giving the miscellaneous receipts, from 1855 to 1864, separately from the members' subscriptions. Those miscellaneous receipts in 1855–56 were 1,570 *l.*; in 1856–57 they were 1,752 *l.*; in 1857–58 they were 1,201 *l.*; in 1858–59 they were 2,724 *l.*; in 1859–60 they were 1,874 *l.*; in 1860–61 they were 2,139 *l.*

134. Mr. *George.*] From what are those receipts derived?—Chiefly from cattle shows, and therefore they do not count as income that we could give control over to any general council. The Table I hold in my hand continues those Returns down to the year expired on the last day of the last month. In 1860-61, as I have stated, the miscellaneous receipts were 2,139 *l.* There was in that year a further subscription, for new museum buildings, of 713 *l.* There was in the same year a special subscription of 2,160 *l.* for the Agricultural Hall. In the year 1861-62, the miscellaneous receipts were 1,842 *l.*; in 1862-63, the miscellaneous receipts were 1,826 *l.* The proceeds of the Art Exhibition in that year were 8,889 *l.*, out of which they erected the galleries in that hall. The year just ended (1863-64) the 31st of March, the miscellaneous receipts show 2,013 *l.* The total miscellaneous receipts for nine years ended March 1864 have been 28,658 *l.*, giving an average of 3,184 *l.* annually. That, combined with the members' subscriptions, averaging yearly 1,275 *l.*, would give an annual average receipt, of which the public have had the whole advantage, of 4,459 *l.*—[*The Witness handed in the following Summary and Table.—Vide* Appendix, Paper (C.).]

135. Sir *Edward Grogan.*] You have drawn a comparison between the proportion of private subscriptions to public grant in the cases of different scientific institutions in this country and the case of the Royal Dublin Society: you do not intend to found upon that any argument that the aid given by Parliament to those and similar institutions should be in any way diminished?—Certainly not.

136. But is it not a fair inference, that inasmuch as large sums are subscribed by the members of the Dublin Society and their friends, they have a fair ground for appealing to Parliament for liberal treatment in the maintenance of their institution?—It is very strongly so felt.

137. Of how many members does the Society consist?—1,200 members, of whom about 800 are elected for life, on payment of 20 guineas; and the remainder, rather less than 400, pay an annual sum of two guineas. The public, in fact, get the whole benefit which the members who pay two guineas get, with the exception of the privilege of borrowing a book, and the privilege of walking on the lawn.

138. You stated that the admission of members is entirely free from political or sectarian bias?—Certainly; it is one of the few institutions in Ireland where, I may say, I never heard a sectarian or sectional question raised or discussed. The members represent all creeds and all denominations; and I am happy to say that during my experience of the Society, which is now 19 years, there has been at all times the most perfect harmony.

139. Your attention has been called in considerable detail to the Report of the Select Committee of 1836, which investigated the affairs of the Royal Society of Dublin; did that Committee make any recommendation with regard to the liberality of Parliament towards the institution?—The following is a passage from that Report: "Should Parliament be convinced by the future proceedings of the Society that it is an institution calculated to secure to Ireland innumerable benefits of the highest character, your Committee feel assured that the House of Commons will not refuse to extend to the Dublin Society the same judicious and increasing liberality which has characterised its recent grants to the British Museum, an institution in many respects similar, though not embracing so wide a field of operation."

140. The recommendations of the Committee embraced in that Report have, as I collected from your answer to the Chairman, been almost in every instance fully and literally carried into effect?—Yes: so rigid was that Committee with regard to an institution receiving public money, that it was recommended that a few daily newspapers, which used to be taken into the conversation room, should be discontinued. It was pressed upon that Committee, that the effect would be to reduce the number of members; and that therefore, while it was apparently economizing a fund, partly public and partly private, it would in reality diminish it. However, the Committee recommended that no newspapers should be so taken in; and for a period now of 28 years, the Society have discontinued even that small means of enjoyment to its members.

141. *Chairman.*] Was not it on account of supposed

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supposed political bias in those newspapers which were taken in that those objections were raised in the first instance?—No; I think the newspapers taken in belonged to all parties. It was newspapers in the abstract, not newspapers of a particular complexion.

142. Sir *Edward Grogan.*] The Committee have, you say, complied to the utmost of their ability with the recommendations made in the Report of the Committee of 1836; have the inducements or promises held out to the Society by that Report, in the passage which you have just read, in any degree been complied with?—Not in one single particular; on the contrary, on every occasion when an urgent need has been felt, we have been obliged to send round the hat and make collections ourselves.

143. You state that for the first 20 years after the Union, that is to say to the year 1819, the Royal Dublin Society received an annual grant of 10,000 *l.* Irish currency?—Yes.

144. I need hardly ask you if the duties of the Society, and the charges entailed upon the Society by those duties, have not been annually, from that period, in course of increase?—They have multiplied enormously.

145. Their wants and their expenditure have increased; have their means increased in the same proportion?—Their means are little more than half what they were. By the introduction of the railway system it is no longer, in fact, a Dublin Society; it is an Irish Society; it is a Society for all Ireland.

146. Was this one of the recommendations in the Report of the Commissioners of 1863, that the whole funds of the Society, whether derived from Parliamentary grant or from private contribution, should be made a common fund, and should be under the supervision of the Department of Science and Art, and that no new branch of work of any kind should be undertaken without their previous sanction?—Yes.

147. Does it occur to you that if adequate support were given to the Society by Parliament, so that it should be maintained in full efficiency for the advantage of the country, such a provision as that would meet with the approval of the Society?—I feel perfectly satisfied that it would.

148. If the wants of the Society, which are now attempted to be met by the 5,500 *l.* supplemented by private subscriptions, were met by the public, the public would have a right to superintend and control their future expenditure?—I feel assured that the Society would recognise the public control in every department in which that control could be beneficially exercised, without the slightest restriction.

149. Will you briefly state to the Committee the manner in which the 5,500 *l.* a year granted by Parliament to the Society is appropriated?—In the first place, agriculture is under three heads: for the agricultural exhibitions and the superintendent's salary, there is 250 *l.* appropriated.

150. Is that the sole amount contributed out of the national grant towards agricultural improvement in Ireland?—Yes, as far as regards exhibitions. Our shows last year cost something like from 1,000 *l.* to 1,200 *l.*; all we get is 187 *l.*, and the salary of the superintendent, 63 *l.* Then, under the head of agricultural laboratory, we have the professor of agriculture, 150 *l.*; that means the professor of agricultural chemistry; we have no professor of agriculture. Then follow wages, laboratory, and lecture-room porter, 52 *l.* chemicals and apparatus, 28 *l.*: total, 230 *l.* Then follows the Agricultural Museum, which, I may state, is the old hayloft of the Duke of Leinster's family: for the salary of the curator, 100 *l.*; wages of porter, 13 *l.*; specimens, preparations, and contingencies, 62 *l.*; temporary allowance for repair and completion of the museum, 120 *l.*: making 295 *l.*; that comprehends everything under the head of agriculture. For the Botanic Garden, the salary of the curator was 175 *l.* (since it has been open on Sundays I think it has been raised to 225 *l.*); the wages of the foremen and labourers are 500 *l.*; rents and taxes, 163 *l.*; fuel, garden tools, implements, manures, composts, plants, freights, and contingencies, 483 *l.*; compassionate allowance to widow of late curator, 25 *l.*: making a total of 1,346. Under the head of natural history: the salary of its director is 250 *l.*, and the salary of the professor of mineralogy, 150 *l.* (that is the gentleman whose position is now filled by Mr. Robert Scott, as deputy); wages of porters, 54 *l.* 12 *s.*; specimens, preparations, freights, and contingencies, 195 *l.* 8 *s.*: making a total of 650 *l.* as the entire grant to the Museum. I may add that that 195 *l.*, which is the entire sum granted by Parliament for the purchase of specimens for our Museum, is nearly all expended in paying the freights of private donations sent to us from different parts of the world, which private donations, when they arrive, we have no means of putting into cases. Under the head of Library: the salary of the librarian is 200 *l.*, clerk's salary, 90 *l.*; two porters, 91 *l.*; for the purchase of books, binding, and contingencies, 549 *l.* 4 *s.* 8 *d.*: making altogether a total of 930 *l.* 4 *s.* 8 *d.* Then for manufactures: guarantee for occasional exhibitions, 150 *l.* I should state that our usage has been this. Feeling that an exhibition held for 150 *l.* would be a perfect farce, we have allowed that fund to accumulate for three years, and have made it a nucleus for a fund to give an exhibition of Irish manufactures. From our early exhibitions may be said to have originated all the great exhibitions that have taken place in this country. We are about to open our triennial exhibition on a much larger scale, under a guarantee supplied by private individuals, which guarantee has reached 10,000 *l.*

151. The only expense you put the country to as regards manufactures is 150 *l.* a year?—Yes. Under the secretary's department, there is the salary of assistant-secretary 300 *l.*, and his clerk 75 *l.*; making 375 *l.* Under the registrar's department, his salary is 200 *l.*, and his clerk's salary 40 *l.*, making 240 *l.* Under the head of miscellaneous, there is compensation allowance to late masters of School of Art, 49 *l.* 19 *s.*; general porters, messengers, attendants, &c., 208 *l.*; female servants, 72 *l.* 16 *s.*; rent and insurance, 300 *l.*; fuel and light for general establishment, museums, library, reading-rooms, lecture theatre, laboratories, &c., 102 *l.* 17 *s.*; general printing, stationery, postage, and advertising, 250 *l.*; contingencies, 50 *l.* 3 *s.* 4 *d.*; total, 1,033 *l.* 15 *s.* 4 *d.*: making an entire total of 5,500 *l.*

152. That is the amount of the Parliamentary grant to the Society?—Yes.

153. Are the sums you have just read appropriated by the Society, or by any authority binding on the Society?—I think it is under the direction of the Department of Science and Art.

154. As to the purchase of books, binding, and contingencies

contingencies (549 *l.*), I suppose that binding is occasionally a very expensive operation?—Yes; and our binding has now come to that length, that we are obliged to leave a vast number of our books wholly unbound, and it reduces our purchasing power to a mere shadow; we have, within a few years, had cast upon us a heavy charge for the binding of specifications of patents.

155. They are sent to you from the Patent Office in this country, are they not?—Yes.

156. They are very valuable documents, are they not, and relating to almost every matter to which human ingenuity can direct itself?—Yes.

157. Therefore requiring to be kept with great care, and free from injury?—Yes. I have here a return of the expenses of binding in the library for eight years; the amount expended on binding, in the last eight years, or since the "Patents" have been received, has been 1,206 *l.* 3 *s.* 4 *d.*, viz., on ordinary books, 391 *l.* 1 *s.* 4 *d.*; while on the specifications alone the cost of binding has been 815 *l.* 2 *s.*

158. The cost of binding those specifications exceeded nearly threefold that of the binding of all other works?—Yes. During the year ending the 31st of March 1864, we could only afford for the binding of ordinary books 38 *l.* 16 *s.* 7 *d.*, while the binding for the patents came to 157 *l.* 11 *s.* 9 *d.* The patents have also involved an expenditure for special cases of nearly 40 *l.* The amount allocated from the Parliamentary grant for purchasing books and binding is 500 *l.* per annum. The amount expended by the Society in purchasing books in the last eight years amounted to 3,142 *l.* 16 *s.* 1 *d.*, averaging yearly 392 *l.* 17 *s.* The amount expended on binding patents in the same period averaged yearly 101 *l.* 17 *s.* 9 *d.*, while the binding of the ordinary books averaged but 48 *l.* 15 *s.* 2 *d.*

159. *Chairman.*] Are those patent specifications which are sent over from the Patent Office much referred to?—No; I am informed they are not much referred to.

160. Sir *Edward Grogan.*] The Society having received only 5,500 *l.* annually by Parliamentary grant, which has been appropriated in the manner you have described, its annual expenses must have been considerably more?—Very much more.

161. How are they supplemented?—From the private income of the Society. Every farthing of the subscriptions of the members goes to those different departments, to supplement the Government grant.

162. Is the supplementary money obliged to be applied in aid of every one of the departments you have now read to us?—I think so.

163. In fact, the work of the Society in the several departments, as approved and sanctioned by the orders of the Committee of Council, could not be carried out, except for the subscriptions received from the members?—Not without further reducing the expenditure in those departments.

164. They could not be carried out in their present efficiency?—No.

165. Mr. *George.*] You stated that the Commissioners of 1863 recommended that 1,000 *l.* should be appropriated to the Library; does that include the expense of the necessary arrangements for the Joly Library?—I think not.

166. You stated that the opinion of the Society, or your own opinion, was that 1,500 *l.* at least would be required for the necessary work for the proper accommodation of the Library?—Yes.

167. Would that include the expense for the necessary work for the proper accommodation of the Joly Library?—In my mind it would.

168. The 4,500 *l.* is for glass cases, and other arrangements absolutely necessary to show the articles in the Museum of Natural History?—Yes. There are three floors of glass cases to be put up. A few have been put up, but a great part of the magnificent room is lying with bare walls, except where it has some of the cases which have been carried from the old rooms, which look as if they had been purchased second-hand in Wardour-street.

169. *Chairman.*] When was the Joly Library given to the Society?—It has been delivered within the last eight months.

170. Provision for that Library could not have been contemplated at the time this report was drawn up?—No.

171. Sir *Edward Grogan.*] You have also included in the 9,550 *l.* the sum of 3,000 *l.* for the purchase of Shelburn Yard; is that for the purchase only, or for the erection of buildings?—For the purchase.

172. It does not include the roof?—No.

173. What would be the cost of the roof?—The contract cost of the roof is 1,243 *l.* We have a clause in the contract empowering us to retain that roof, if our means should enable us to do so; and I think, in that case, assuming that the receipts at the doors will pay part of it, we would get it from the contractor for something like 1,000 *l.* to 1,100 *l.*

174. With respect to the Botanical Gardens, has any application come before the Council, or a complaint come before the Council, of damage done to plants in the greenhouses of the Botanical Gardens, by reason of ladies' dresses coming in contact with them?—Yes; the only damage in those gardens (very much to the credit of those who go there) has been the occasional throwing down of a flower pot by crinoline.

175. *Chairman.*] Quite accidentally?—Yes.

176. There has been no wanton mischief done since the gardens have been thrown open on Sunday?—I have never heard of an instance of wanton mischief.

177. Sir *Edward Grogan.*] Has the question been pressed on the consideration of the Council; that, in order to guard against this accidental damage, there was a necessity for widening the passages through those greenhouses?—Yes.

178. You stated that the Society is in such great want of funds, that it is unable to open the Library more than three evenings in the week for the use of students; the extra expenses are gas and the attendance of a servant?—Yes.

179. Who pays those expenses at present?—They come out of the general fund.

180. *Chairman.*] They would come under the head of fuel and light for the general establishment?—Yes.

181. Colonel *White.*] Have you asked for any particular sum to enable you to open the Library every day in the week?—I think we did by a memorandum of application submitted to Captain Donelly, which was reported upon by him; and which report was read to the Treasury Commission.

182. Sir *Edward Grogan.*] In your application to the authorities in this country was any suggestion from the Council made, that the rent of 100 *l.* a year, payable to the Society for the portion of the lawn now occupied by the National

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Gallery, should be capitalized, to enable you to purchase Shelburn Yard?—Yes; it took from us 100 *l.* a year which we had calculated upon; but the extreme urgency of acquiring possession of Shelburn Yard was such, that we offered even to give up that 100 *l.* a year to secure it.

183. In answer to the Chairman, you stated that you expected to recover the arrears of the 100 *l.* owing to you by the National Gallery?—Yes.

184. Was the idea of capitalizing that 100 *l.* a year, and giving thereby to the Society a capital of a certain sum of money, the idea that was in your mind when you gave that answer?—We did not propose to capitalize the rent till we got the 3,000 *l.* Up to this time we have neither the 3,000 *l.* nor the rent. Up to the time that we get the 3,000 *l.* we expect to receive the rent. The arrears have been expended by anticipation for the iron railing. A contract was made with a tradesman to put up the railing upon the faith of that rent being forthcoming to meet the expenditure.

185. Will you explain shortly the position of the main building of the Royal Dublin Society, and show how it might occasion a thoroughfare to be made through the premises, if that lawn were thrown open, as a question that was put to you suggested?—The premises are shown upon this plan (*producing it*). This building is what was the old house of the Duke of Leinster. That building is our new, and yet unfinished Museum; this is Shelburn Yard, which certain private gentlemen have taken possession of, in trust for us. This is the Agricultural Hall which we have built, and this is our Agricultural Museum, formerly the Duke of Leinster's haylofts and stables. It is almost falling, I may say. Here are our drawing schools up two floors. This yard would be available for further exhibition of farming implements, in addition to the Shelburn Yard. There is a passage through here, giving access from the front to the rear; and if this lawn were thrown open, I think there would be considerable difficulty in preventing this being used as a thoroughfare by everybody, to pass from Molesworth-street into Merrion-square. The railing, which cost us so much money, runs from there to there. From that point to that, was done at the expense of the National Gallery, or at the expense of Parliament; for they have contributed nothing towards it, except through Parliamentary grant; but it was done by the Board of Works, under the authority of the Government, and then this was put upon us to complete up to this point. We were obliged to adopt the same pattern, which is a very handsome pattern.

186. If that lawn were open for the indiscriminate use of the public, your apprehension is, that the passage would be used as a thoroughfare from one street to the other?—So it is conceived by the Council.

187. There is a door in the main body of the house, leading through the hall, by which members can pass through the building and out into Merrion-square, if they think fit?—Yes.

188. If this were made a public thoroughfare, as has been suggested, would it not almost of necessity entail a servant being placed at the back door, to prevent none but members passing through the house, or else deprive members of that facility, which they now enjoy?—That would be the necessary consequence.

189. You described to us that a theft had been committed in the Museum some time ago, of some valuable property; what protection exists at this moment against a repetition of such thefts?—In consequence of what I may call the reprimand administered to the Society for not putting up the shutters, which they had no money to put up, they have, in fact, incurred the responsibility of debt, and put up shutters on the lower windows of that Museum.

190. You had not funds of your own, either from subscription or from Parliamentary grant, to enable you to give the necessary security to the windows?—No.

191. Were you obliged at any time to obtain the services of a policeman, to prevent a recurrence of those thefts?—We were till those shutters were put up. We had a policeman patrolling the garden, and when we asked that his services should be given to us free, as a matter of public interest, the answer was that we must pay for it as anybody else, and we had to pay the expense of the policeman as long as he was there.

192. With regard to the property in the whole of the premises being held in trust by the Society for the public, the Report of the Committee of 1836, recommended that that should be distinctly understood, did it not?—Yes.

193. Allusion is made to it in Mr. Playfair's minute of 1854?—Yes.

194. What steps did the Society take to guarantee that such property should belong to the public, and not to the members of the Society?—There was a resolution put before the Society in 1836, which was adopted, to secure to the public all certainty against any question ever being raised upon that point, and there is a resolution in 1854, which secures to the public the entire control, so that no supposable case could exist, of the Society setting up an ownership in any part of the premises.

195. Will you read the resolution which the Society came to in 1836;—"Resolved, that with respect to the specific admission required by the Lords of the Treasury touching the rights in the property at present possessed by the Society as a chartered body, the Society does not claim, nor has it ever claimed, the right of disposing of any portion of it's property by the vote of any of it's members, on any subject foreign to those for which it has been founded and incorporated, and therefore they cannot feel any hesitation in admitting in the fullest and most unequivocable manner, that they hold their property subject to public trust, and for the public benefit, with a view to the objects of the charter, and the purposes of the institution."

196. Is that resolution binding on the Society as the understanding on which they hold their property?—Not only so; but I believe it was made stronger by being reiterated in the year 1854, in some matter that the Department of Science and Art took exception to.

197. You mentioned that some new arrangement had been recently introduced into the Art Schools under the management of the Committee of the Dublin Society?—Yes.

197*. What is the character of the tuition given to the pupils now?—The details are somewhat complicated: we have classes in the forenoon for young females who attend in the day, and who could not attend in the evening; and we have classes in the evening, when those of the artizan class who could not attend in the day can attend

attend. Our master is at work 36 hours in the week.

198. I observe in the Report of the Committee of 1836, an objection is made that the master of the school only devotes nine hours during the week to the teaching of the pupils; it is considerably more at present?—It is nearly four times. Dr. Steele will give those details. The classes are so formed that our master is obliged to work in the forenoon of some days, in the afternoon of other days, and in the evenings of others, so as to enable all classes to receive the benefits of the instruction.

199. Carrying out the recommendations of the Committee of 1836 in the fullest sense?—Yes; I look forward to our schools now becoming, probably, the most efficient in the kingdom.

200. You were asked whether the analyses of soils and minerals, and other agricultural analyses, were not made by the chemist who acts for the Royal Agricultural Society; would he make an analysis for you, for instance?—There are two classes of analyses; there is one which is only nominal, which I am not competent to go into in detail; but the other, which is made more carefully, he will not supply until he is paid. But I would rather not give any evidence upon that.

201. Are you aware that Dr. Apjohn is precluded from making an analysis of water or soils for others than the members of the Royal Agricultural Society?—I am not.

202. *Chairman.*] The members of the Royal Dublin Society would obtain an analysis of soil from the chemist of the Royal Agricultural Society gratuitously, would they not?—No; I think there is a charge.

203. Is it the same charge to them as to the public?—I do not think there is any distinction.

204. Sir *Edward Grogan.*] You have been asked whether the Society would be prepared to carry out to the full, recommendations in the Commissioners' Report of 1863. Has any desire ever been expressed by the Society to rescind the resolution they came to, expressing their willingness to comply with the wishes of the Government in the manner recommended by the Commission?—Not the slightest. I might say that the unanimous feeling is, that it is desirable to put ourselves in every way *en rapport* with the Government authorities. We feel that any requirements made of us by the Government would be only such as the Government considered to be just and proper. We do not apprehend that there would be the slightest difficulty in complying with them.

205. You have said that the Society was prepared to adopt the recommendations of the Commissioners when everything was suspended on the receipt of Mr. Hamilton's letter?—Yes.

206. As far as your knowledge goes, are the Society equally prepared to carry them out now?—I have not the slightest hesitation in saying so.

207. Is the present organization and constitution of the Council the same as was recommended by the Committee of 1836?—It is.

208. Would it be competent for the Society to alter it without the concurrence and sanction of the authorities in this country?—I think not.

209. Consequently, when you were desired by the Treasury not to proceed further in the change, you had no alternative but to suspend action?—Yes, very reluctantly.

210. *Chairman.*] With reference to the joint fund of Government grant and private subscription, it is stated in the Report of the Commissioners of 1862, that the Government has no previous cognizance of the application of a portion of the joint fund, and that they might therefore indirectly contribute to objects not within the scope of the Parliamentary grant. Then there is a recommendation made by the Commissioners, "that the Society should enter upon no new branches of work without the consent of the Government, and that the annual estimate submitted to Parliament should show the whole of the expected income and expenditure of the Society during the ensuing year, whether derived from the Parliamentary grant, or from other sources." Has that been complied with?—It could not be up to this time. It would form part of our new system. We are quite ready to place ourselves in such a position as to undertake no new work and to comply with that recommendation.

211. Has any resolution been passed to the effect of accepting that arrangement?—Yes.

212. Sir *Edward Grogan.*] The Society has been in the habit of sending professors into the country to give lectures in the provinces, has it not?—Yes.

213. Was the object of that, that the people of Ireland not residing in or near the metropolis, should have the same facilities for acquiring instruction upon the subjects treated of in those lectures that the residents of Dublin had?—Yes, it is stated in the Report of the Treasury Commissioners, that it is desirable with a view to spreading a taste for scientific improvement through the country, that those provincial lectures should be continued. They follow in that the view which was expressed by Sir William Hamilton in 1836, whose letter you will find printed at the end of the Report of the Committee of 1836. But Dr. Sidney, who has very ably conducted that department of provincial lectures for some years, is more conversant with the subject, and will be better able to give the Committee information upon it than I can.

214. Did the Committee of 1836 allude to the subject in their Report?—They did.

215. Did they recommend their continuance?—Yes; they say, "Two courses of lectures are delivered by each professor during the year, and the average attendance is stated to be from 400 to 500 persons." The description of knowledge which is communicated through the medium of lectures, such as those which are given in the Dublin Society, although bearing practically upon many of the arts and occupations of life, has hitherto formed no part of the regular education which persons in the middling, or even the wealthier classes of life ordinarily receive. An institution, therefore, which supplies that kind of instruction, which is not elsewhere to be procured, becomes a valuable subsidiary to general education. Hitherto, however, the enjoyment of these advantages, in as far as they are provided by the annual Parliamentary grant to the Royal Dublin Society, has been chiefly confined to Dublin and its vicinity, whilst it is in evidence that, throughout a great part of Ireland, including most of the most flourishing towns, no similar opportunities exist for acquiring that kind of instruction which is taught in the lectures of the Dublin Society. Your Committee have been led to hope that, under a more efficient system of administration, the Dublin Society may be made "instrumental in affording those opportunities which have heretofore been wanting, and in thereby

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creating and diffusing a taste for useful science throughout Ireland, as well as in the metropolis."

216. That was the main object of the Society in instituting and carrying out those lectures?—Yes.

217. Will you read a short passage from Sir William Hamilton's letter on the same subject?—At the close of his letter he says, "But in less abstract departments of science, such as botany, geology, mineralogy, and chemistry, the professorships and lectures of the Society are, I believe, already useful, and might perhaps be rendered more so by improved regulations, though I cannot myself pretend to point out any specific improvement. I shall only venture to suggest that, since it is almost as important, if not more so, to excite than to gratify a taste for science in Dublin, these lectures ought to be in a large degree gratuitous, if possible, wholly so; and I am so impressed with this, that I would not hesitate, had I the power, to divert some funds from other objects connected with the Society, and charge the audience nothing for the lectures, if the free admission of the hearers could not otherwise be provided for."

218. Colonel *White.*] The lectures are gratuitous, are they not?—The lectures of the Royal Dublin Society, forming the earlier part of a series of which the first part is popular, are gratuitous; but, in the second part, when they are delivered at Stephen's Green, they assume a more technical form, and a small admission fee is charged. Whenever we have made a charge, we have found that the effect has been to reduce the number of attendants from 120 to 30; in fact, it amounts to a total exclusion. It is a great object to have those lectures made as free as possible, and not to make the charges a means of supporting the staff by which they are given.

219. *Chairman.*] Is not it the fact that at one time a small charge was made, and that the attendance was so affected by it that the plan was relinquished of making any charge?—I cannot call to mind that the Royal Dublin Society ever made a charge at any time.

220. Mr. *Waldron.*] Will you read the recommendation of the Report of the Committee of 1836, upon the question whether or not an admission-fee should be charged?—"With respect to the question whether or not a fee should be required for admission to the lectures, your Committee entertain a just deference for the opinion of the Committee of 1829, which recommended that the lectures should not be gratuitous; but they find that, upon the whole, the tendency of past experience, as well as the opinion of scientific men conversant with the present intellectual condition of Ireland, has been to show that there would be great hazard of limiting instead of extending the usefulness of the Society if the public were admitted to the lectures only upon the payment of fees. It is stated that the effect of requiring even a very small sum for admission to the lectures, in obedience to the recommendation of the Committee on the Irish Estimates, was to reduce the attendance from 500 to 30 persons. The Committee would therefore recommend that there should be in each department one gratuitous course, and one course for which payment should be required."

221. Sir *Edward Grogan.*] You stated that about 150 *l.* was annually appropriated from the Government grant for the encouragement of manufactures in Ireland, and that that sum was allowed to accumulate for three years, for the purpose of holding an exhibition. Is there an exhibition about to be held?—There is one to be held this year.

222. You mentioned something about a guarantee fund having been raised; what is the amount of the guarantee fund to guard against any loss?—I see by the list a guarantee fund of 10,236 *l.* has been raised for the exhibition this year.

223. I need hardly ask you, from the names in that list, whether that guarantee is not *bonâ fide*?—It includes the most eminent men in the Society, and the most eminent traders in Dublin, and gentlemen of rank and fortune in every part of the country.

224. *Chairman.*] Is that amount a guarantee fund for that exhibition, or a subscription towards it?—It is a guarantee that, if the funds received at the doors should fall short of its expenses, there being no funds of the Dublin Society available, those gentlemen will make up the deficiency.

225. You have had previous exhibitions?—Yes.

226. What has been the result of the receipts of those exhibitions?—The result of the exhibition we held in 1861 was that it paid its expenses, and enabled us out of its funds to put up the galleries now in our present Agricultural Hall.

227. Mr. *George.*] What did they cost?—£. 1,200. The receipts taken at the doors during the exhibition amounted to 8,800 *l.*: the expenditure, including the putting-up of the galleries, was just covered by the receipts.

228. *Chairman.*] The guarantee for the exhibition was for 5,000 *l.*, was it not?—The guarantee, I think, was for more; I think it was for 8,000 *l.*

229. Mr. *Waldron.*] The galleries were, in fact, put up before the exhibition opened, were they not?—Yes.

230. *Chairman.*] Do you anticipate a surplus from the forthcoming exhibition?—We cannot tell. This is the prospectus of the exhibition which we are to hold this year (*handing in the same.*)

231. Sir *Colman O'Loghlen.*] You were asked whether the Council were in possession of the plenary powers which it was intended they should have by the resolution of the Society in accordance with the recommendation of the Commissioners; is not it the fact that such a change could not be made as recommended by the Commissioners except a new charter was granted?—A new charter would be required.

232. The expense of a new charter would be 400 *l.* or 500 *l.*, would it not?—We hope we would get a charter without paying the office fees involved in all charters. I have a copy of the charter as it was submitted for approval, if the Committee would like to see it.

233. There has been no new charter?—No.

234. With respect to the Library, have you ever heard any complaints of persons being refused admission to the Library?—No, not a single one.

235. Practically it is an open Library?—Yes.

236. Have you ever heard any complaints of members abusing their privilege of taking books home?—I heard a complaint made against a gentleman, who stands probably higher than most Irishmen as an author and a scholar, that he, under a certain permission given him by the Library Committee, had taken away a greater number

number of books, and kept them for a longer time than was allowed.

237. Am I correct in stating that the only privileges enjoyed by annual subscribers are, admission to the shows gratis, the privilege of borrowing books, and the privilege of admission to Leinster Lawn?—And admission to the Botanical Gardens on the closed days.

238. If the privilege of borrowing books and the privilege of passing through Leinster Lawn were taken away, do you think that you would lose many annual subscribers?—I do; and I think that it would be disastrous to the Society in reducing the working staff, which is supplied by professional members and others who can give time to the duty; it would depreciate the Dublin Society from its character of a popular institution, and convert it more into an institution having the character of a Government bureau.

239. Members are admitted into the Dublin Royal Society by ballot?—Yes.

240. You stated that since the year 1836 two persons have been excluded?—Yes.

241. And between 1800 and 1836 four persons were excluded?—Yes.

242. Are you aware that of those two excluded since 1836, one was admitted afterwards?—I have heard so.

243. Therefore, for the last 64 years, only five persons have been blackballed?—Yes; it is well known that there is no exclusion.

244. *Chairman.*] With regard to the necessity for a new charter, to which Sir Colman O'Loghlen alluded: when the alteration in the constitution of the Society was made, on the recommendation of the Committee of 1836, was it then considered necessary to have a new charter?—No; the arrangement did not withdraw the executive power from the Society at large, because each act done by the Council, which was then instituted, had to be reviewed and confirmed by the Society at large; but by the arrangement now suggested, the acts of the Council would not require to be reviewed and affirmed by the Society at large; and, in fact, the object is to withdraw that necessary review and revisal from the Society at large, and vest it in the Council. The language held by Mr. Lowe and Lord Granville to the deputation was this: they said, "We do not want to interfere in your local management; elect your Council as you please; you can appoint them and displace them as you please: but as long as they are in power, we require that they should be vested with such powers as correspond with those of the Trustees of the British Museum and other kindred institutions in England."

245. You said some time ago, in answer to a question by Sir Edward Grogan, that as far as admission to the Society goes, there is not the slightest religious or sectional bias, one way or the other?—I never heard of such a thing.

246. Have you ever heard any complaint upon that point?—Not the slightest. I have been in the habit of mixing very freely with people holding strong political and religious opinions on both sides, and I never heard it even charged against the Royal Dublin Society.

247. Did you ever hear any complaint made of there being any religious bias shown with regard to selecting members of the Council?—No.

248. Or with regard to selecting members of the committees?—I never heard it even hinted at.

249. You never heard a complaint made that there was no Roman Catholic upon the Council?—I have never heard a complaint of the kind. The Honourable Member for Tipperary is on the Council, I see. I do not think such a question ever arose; I never heard it even in private conversation; I believe quite the opposite feeling prevails, that every effort should be made to bring together all parties. I look upon the Royal Dublin Society as one of those means tending very much to subdue the animosity that has existed between creeds and parties in years gone by.

250. Mr. *Dillwyn.*] You said that the Royal Agricultural Society addressed itself to the provinces only, while the Royal Dublin Society's exhibition was an exhibition for the metropolis; are you of opinion that it would be more for the interests of agricultural exhibitions, that the whole of the arrangements of those agricultural exhibitions should be under one system of management?—I do not think that there is any clashing: the two Societies are moving on parallel lines; nearly all the members of the one are members of the other. They were formed, I think, with the view of carrying out the very object I have stated, that while the Royal Dublin Society should work in Dublin, the provinces should be influenced, as regards agricultural improvements, by the shows of the Agricultural Society taking place in the provinces. I am aware, being a member of the Agricultural Society, that they have often found great difficulty, as the spread of farming societies has gone on, in getting a town of sufficient importance in which to hold their shows; so much so, that many members of the Agricultural Society have looked forward rather despondingly to the fact that they will have to give up their provincial shows. In truth, the railways have made ours the most important show, viewing it as an agricultural question. The shows of the two Societies are held at different times of the year: one show takes place in April, which is the best period for exhibiting breeding stock in horned classes; their show takes place in the month of August, which is the best time for exhibiting breeding stock in sheep.

251. In fact, they work so entirely together that they may be said to be one executive?—Yes. There is the most perfect cordiality; three-fourths of the members of the Royal Agricultural Society are members of our body. Recently the Royal Agricultural Society had their attention called to the decline in the breed of horses in Ireland, and they appointed a committee to carry out a horse show, which has been held within the last fortnight in Dublin. They asked the Royal Dublin Society to accommodate them: we were preparing our premises for the exhibition, which is to open next month; but so anxious were we to accommodate them, that we immediately suspended the works of the contractors, and gave possession of our entire premises to the Royal Agricultural Society (without the slightest charge of course), giving them the benefit of all our staff; and they held their show within the last fortnight, at which were exhibited nearly 400 horses: it embarrassed our contractors with regard to the preparations for our exhibition, but we conceded it at once. Within the last month, by the favour of the Government, a grant has been made of 2,000 *l.*, with a view to see how far the cultivation of flax can be promoted, and the two Societies have formed a joint committee upon the subject, to act with each other.

G. W. Mansell, Esq.

25 April 1864.

252. Sir *Colman O'Loghlen.*] The Agricultural Society is purely a private society, is it not, it having no grant from the Government?—Yes.

253. You stated that it had never held a show in Dublin; I think it has held one show in Dublin?—Yes.

254. Mr. Scott, you say, delivers lectures now; is he paid?—The details of that will be better given by those who follow me. The fact is simply this: Dr. Scouler, who is a very old man, receives his salary in the nature of a pension; he was not discharged from giving lectures, though the Department of Science and Art assented to his not giving them. Finally, by an understanding between Dr. Scouler and the Society, Dr. Scouler has assented to a portion of his retiring allowance going to Mr. Scott; it is a mere matter of 50 *l.* a year.

255. *Chairman.*] Did Dr. Scouler assent to that?—Yes.

256. Did he ask permission to appoint his *locum tenens*?—He suggested in the first instance that he should come over and deliver lectures himself, and then we had a medical certificate stating that it would be not only dangerous, but most likely fatal, to Dr. Scouler to undertake such a duty; finally, by a friendly compromise, it was so arranged.

257. Why was he summoned back to give lectures, after being absent for so considerable a period?—In consequence of the growing requirements of the Mineralogical Department, it was pressed on us year after year in various forms. There has been in Ireland an enormous development of mining industry within the last 20 years; there are districts known to many members of the Committee where mining was unknown, where mining operations on a very large scale are now being carried on.

258. Mr. *Waldron.*] With regard to the time when the duty of encouraging the useful sciences was thrown by Parliament upon the Royal Dublin Society, has your attention been directed to the 25th of George the Third, chapter 61, in 1785?—Yes.

259. When the grant was given for the support of the drawing schools, "and the cultivation of such useful sciences as the Society should think fit"?—Yes.

260. You spoke of the dissatisfaction which exists as to the amount of grant voted by Parliament to the Dublin Society as compared with that voted to other institutions; that, I believe, is a dissatisfaction of very long standing?—It is; it is felt in Ireland as a very great grievance; that whenever we apply for public aid, we are asked what aid are you getting from private subscriptions, and when we come to ask what subscriptions are given in aid of the British Museum, or the National Gallery, or the South Kensington Museum, we find there is practically nothing.

261. At the time of the Union a stipulation was made that the annual grant of 10,000 *l.* Irish currency should be continued to the Royal Dublin Society?—Yes, and it was so continued in conformity with that stipulation for 20 years.

262. At the time that that grant was made, the operations of the Society were very small indeed compared to what they are now, were they not?—I should think the present operations, as regards practical value to the country, are tenfold what they were then.

263. £.150 of the Vote which you receive now is given, is not it, for the opening of the Botanical Gardens on Sundays, to pay for the additional staff?—Yes; we applied for that.

264. The Society, in obedience to the wishes of Parliament, opened the gardens on Sunday, though they were themselves opposed to it?—Yes.

265. Sir *Edward Grogan.*] What do you mean by "staff"?—The officers in charge of the gardens, to see that people walk where they ought, and that boys do not run over the beds.

266. Mr. *Waldron.*] The number of readers you gave as making use of the Library was exclusive of the members of the Society?—Yes; the number in 1863 was 19,012.

267. The new reading room for students is in the centre of the house, facing the lawn, is it not?—Yes.

268. Do you think if that lawn was open to the public, that the noise of children playing there might be very likely to disturb the students in the reading room?—I should not think so; it is two stories high; it is not on the ground floor, and the windows do not go near the ground.

269. Has it not been proposed to erect additional buildings on that lawn?—It has several times; we have looked forward to the possibility that further buildings might be erected upon it; there would be a greater objection on that head. It is called a lawn, but it is merely a small plot; all that remains of it is about an acre and a half.

270. Mr. *Lefroy.*] A great portion of it is built upon?—Yes; the part remaining can hardly exceed an acre.

271. Mr. *Waldron.*] If the Society saw fit hereafter to resume possession, assuming that the lawn were thrown open to the public, it would be likely to cause a great deal of dissatisfaction, would it not?—Yes; I think there would be the strongest objection to opening it. I am supposed to entertain very latitudinarian views upon the opening of such places, and for giving free admissions to the public; but that is a very small plot, and I think it would be embarrassing the future movements of the Society very considerably, giving at the same time an infinitesimal accommodation to the public.

272. With regard to the Veterinary Department, I believe your co-honorary secretary, Lord Dunlo, took a great deal of interest in that subject, some time ago?—Yes.

273. He endeavoured to obtain private subscriptions for the establishment of a Veterinary Department?—Yes.

274. That failed through the want of co-operation on the part of the public, and also from the want of funds from Parliament?—Yes.

275. The Society is of opinion that it would be a desirable addition to the Society?—I think they carried a resolution to that effect; and the establishment of such a department becomes more important, now that the Society has resolved to hold horse shows.

276. *Chairman.*] Are you aware of any veterinary institutions supported by the public money in either England or Scotland?—I am not aware of any.

277. You think that such a department would be useful?—I do.

278. Mr. *Waldron.*] With regard to the estimate that has been made for the Library, you said that the estimate was put at 1,000 *l.*; do you know whether an estimate has been procured from the Board of Works for the expense of shelving those new rooms?—I do not know.

279. Do

279. Do you not know that the estimate of 1,500 *l.* was furnished by the Board of Works?—I am not prepared to say.

280. As to the 3,000 *l.* that so much has been said about, that was the conversion of the rent of 100 *l.* a year, at 30 years' purchase, into one sum?—Yes; it was, in fact, depriving ourselves of our income of 100 *l.* a year to secure that yard.

281. Mr. Cardwell, when Irish Secretary, recommended that that should be done, did he not?—Mr. Cardwell was very anxious that it should be so carried out.

282. In fact, it is not quite the correct way to put it that the Royal Dublin Society are asking for it as a grant. The Society merely ask to have it in lieu of rent which they ought to receive?—It is commuting 100 *l.* a year of our income into a sum of 3,000 *l.*

283. *Chairman.*] You would hand over the National Gallery to the Treasury, I suppose?—No; they will pay nothing to anybody. We propose to give them a lease in perpetuity, at a peppercorn.

284. Mr. *Waldron.*] With regard to the museum which you think it desirable to establish in connexion with the Botanical Gardens, you probably know that part of the garden of the Royal Dublin Society is laid out as a medicine garden, that part of it is laid out as a dyer's garden, and that other parts are devoted to the cultivation of plants used in manufactures. Do not you think that a museum would be much more useful attached to a garden, where people could see those different plants growing, than at Kew, where they are not to be found, at least not in the part open to the public?—Yes; I think they would. Our botanical lectures are very favourite lectures, because some of them are delivered in those gardens by the lecturer, taking his class round with him, and lecturing in the garden.

285. You mentioned that the Society had not suggested the question of amalgamation with other societies in Dublin?—No. It came upon us by surprise. It grew out of a discussion in the House of Commons, in which the principal speakers of the past Government and of the present Government were Mr. Adderley and Mr. Lowe; both of those gentlemen expressed a strong opinion in favour of amalgamation; I think my honourable friend, the Member for Kildare, took a part on the other side; and other Honourable Members also spoke; but it did not originate with us in any way, and we believe we would have got our money if it had not been for that.

286. Do you know that, in the Report of the Committee of 1836, something of that kind was suggested; that there should be in Dublin a great National Museum under the Dublin Society?—Yes; they say "That your Committee are fully impressed with the opinion that it is on every account most desirable that there should be in the metropolis of Ireland a great National Museum, and that the Dublin Society is the body under whose care such a museum could be most advantageously placed. They do not hesitate, therefore, to recommend that the buildings of Leinster House should be extended in such a manner as to provide ample room for the reception, arrangement, and exhibition of the objects which may from time to time be collected into such a museum. The present house of the Society admits of such enlargement with advantage, and at an expense which, with a view to present purposes, it is estimated would not exceed 3,000 *l.*"

287. *Chairman.*] That recommendation was given 18 years before the erection of the Museum of Irish Industry?—That was given in 1836.

288. In 1854 the Museum of Irish Industry was completed, was it not?—Yes, but the Museum of Irish Industry had its origin in 1845 or 1846.

289. When you say that the Royal Dublin Society has never taken any action with regard to this consolidation, of course you refer merely to the action of the general body?—Yes.

290. You are perfectly aware that, in the examination before the Commission of 1863, most of the members of the Royal Dublin Society, giving their own individual opinion, expressed themselves very strongly in favour of that amalgamation?—I am aware that such evidence was given; and, for myself, if you wish to have my private opinion, I would say that if an amalgamation could be effected with what I call perfect good will, it would be desirable to have one institution; but I think it would be very dearly bought indeed if that amalgamation were acquired by feeling that another society had lost any position, or rank, or weight, that it was entitled to.

291. In the Estimate for the Royal Dublin Society for 1864–65, under the 8th head, I find, "Repairs provided by the Office of Works: Buildings, Royal Dublin Society, 660 *l.*; Glasnevin Botanical Gardens, 662 *l.*" Will you tell the Committee what those sums are for?—I cannot answer that question, and the reason I cannot answer it is this: that all questions going before Parliament by way of estimate for repairs, go from the Board of Works, without any previous consultation with us; therefore, though we may have pressed our wants upon them, the Board of Works arrive at their own decision independently of us, and send it forward to the Treasury, not through us.

292. You do not know whether either of those items is applicable to any of the works you have described?—I am quite sure they are not; they are merely for repairs and maintenance of the existing structures. I have here a list of the members of the Society; it includes over 30 Peers, and nearly all the leading men in Ireland. (*The Witness handed in several Papers.—Vide* Appendix).

Jovis, 28° *die Aprilis*, 1864.

MEMBERS PRESENT:

Mr. Cogan.
Mr. George.
Mr. Gregory.
Sir Edward Grogan.
Mr. Leader.
Mr. Lefroy.
Sir Colman O'Loghlen.
Mr. O'Reilly.
Sir Robert Peel.
Mr. Waldron.
Colonel White.

WILLIAM HENRY GREGORY, Esq., in the Chair.

DOMINIC J. CORRIGAN, M.D., called in; and Examined.

D. J. Corrigan, M. D.

28 April 1864.

293. *Chairman.*] I BELIEVE you are President of the Royal Zoological Society of Ireland, and also President of the College of Physicians in Ireland?—Yes.

294. I believe the Royal Zoological Society was founded so far back as 1831?—1831 or 1832.

295. Was it called "Royal" at first?—No; but some years after it was founded, there was an enquiry into its composition by some one on the part of Her Majesty, and the constitution and management of the society seemed so deserving of approbation that Her Majesty accorded to us the right to call ourselves "The Royal Zoological Society."

296. The Society is managed by a President, five Vice Presidents, two Secretaries, and a Council of 15, is it not?—Yes, and two Honorary Secretaries.

297. What number of members have you at present on the average?—As nearly as I can say from memory, between 300 and 400.

298. About 240 or 250, I think are annual members, and 144 are life and honorary members?—As well as I recollect.

299. What is the life subscription?—The life subscription is 10 guineas to a person who is not a member of the Royal Dublin Society; to a person who is a member of the Royal Dublin Society, the life subscription, I think, is seven guineas.

300. What is the annual subscription?—To a member of the society, a guinea entrance, and a guinea a year, and to a garden subscriber, only 1 *l.* entrance, and 1 *l.* a year. A member of the Royal Dublin Society is admitted without payment of the entrance fee. A person wishing to become a member must be proposed by one member of Council, and seconded by another; but there is no ballot or any other regulation to be gone through. A garden subscriber has simply to enter his name in a book at the garden gate, and he gets a ticket, but he is not entitled to take any part in the proceedings of the society. The number of garden subscribers is very small.

301. You have stated that the members of the Royal Dublin Society have certain privileges in their relations with the Royal Zoological Society; that is to say, that they pay as a life subscription seven guineas, whereas anybody else would pay 10 guineas. Have they any other advantage except that?—They enjoy all the advantages which the members of the society have in common; that is, they have free admission for themselves and two companions at any time. Their wives and children have free admission, and if the wife of a member be dead, the privilege is transferred to the governess, or person in charge of the children. When once a member of the Royal Dublin Society becomes a member of the Zoological Society, he has the same privileges as all the other members.

302. Has he to pay an entrance fee in addition to the seven guineas?—No; the seven guineas covers the whole expense.

303. What are the terms of admission of the public to your gardens?—On week days in summer, up to five o'clock, the admission is 6 *d.* per person; from five o'clock in the summer evenings to dusk, the admission is 1 *d.* per person. We give, in addition, free admission to the children of all the charity schools of Dublin, provided they are accompanied by persons to take charge of them, as from their numbers the keepers would not perhaps be sufficient to watch them. We give that free admission, as it may be almost called, on summer evenings after five o'clock, for the convenience of our trading and working people; and on Sundays, after the hours of Divine service, from two to dusk all the year round the gardens are open to all at 1 *d.* per head, the subscribers and members, of course, retaining the right to pass in at all times free of charge.

304. What were your receipts in the year 1863?—As nearly as I can recollect our receipts in subscriptions were about 250 *l.* or 300 *l.*

305. The receipts arising from the 6 *d.* admissions were how much?—As well as I can recollect our expenditure is about 1,200 *l.* or 1,300 *l.* a year, and if we take 250 *l.* as our subscriptions, and 500 *l.* as the Government grant, that is 750 *l.*, then the other receipts from admissions must make up the difference.

306. Do you think I am right in saying that the 1 *d.* admissions for 1863 amounted to 471 *l.*; that the receipts arising from payments larger than 1 *d.* amounted to 347 *l.*; and the subscriptions to 250 *l.* the total receipts of the society being 1,628 *l.*?—I am sure if you quote it from one of our reports it is quite correct.

307. I think there was a deficiency in the balance of expenses over receipts last year, inasmuch as the receipts were 1,628 *l.*, and the expenses

penses 1,742 *l.*?—I take it for granted that is quite correct.

308. Have you any expectation that your receipts are likely to rise for the future, above what they are at present?—I am afraid not, for this reason, we were the first society to give what may be called gratuitous admission to the poor; that is to say, a penny per head, that is nearly 20 years ago. Of late years our example has been followed or exceeded. The Royal Dublin Society has opened its Botanical Gardens to gratuitous admission, and the Academy of Arts in Dublin has done the same, and I think it is probable that those attractions will draw away numbers of those who used to visit us at the small rates; so that I do not think it is probable that our receipts will increase, unless our population increases considerably.

309. It was in the year 1848 that you obtained the Parliamentary grant of 500 *l.*, was it not, for your society?—It was after 1848; the date I have here as the minute of the Department of Science and Art is the 11th April 1854.

310. You made an application for that sum of money in consequence of the great falling off in your funds, arising from the general depression of the country, did you not?—In consequence of that, and in consequence of our considering that it came within the class of scientific institutions, and was likely to afford great information to the people, and also to contribute very much to the improvement of art, by giving to painters and modellers and persons who studied art access to those living originals that could not be obtained in any other way.

311. On receiving that Government grant, did you make any alteration with regard to opening the gardens more freely to the public than before?—No; because I recollect we had opened the gardens before that to the people at a penny admission; and I know we put forward as a ground for obtaining the Government grant, that our gardens were so freely open to the people, and at so low a rate, that we had approached what is now so universal, gratuitous admission to public gardens.

312. In regard to those advantages given to members of the Royal Dublin Society, upon what ground are those advantages given?—I have not a very clear recollection of the exact circumstances; but I know, as far as I can give it from memory, one ground was that the grant was to be given through the medium of the Dublin Society. The Dublin Society also afforded us the use of their lecture rooms. We wished to act in harmony with them; and I think there was that kind of general good feeling, or desire to meet one another, on both sides, that we lowered our rate of admission for them to seven guineas. I should observe that there is another privilege that we give the Royal Dublin Society, in addition to what I have mentioned, namely, that, unless in exceptional cases, we give to that society all the animals that die in our gardens, for the purposes of their Museum. We have given them also that splendid specimen of the plesiosaurus, presented by the late Sir Philip Crampton; a very valuable specimen, but which was being injured in our gardens; and we also presented to them a donation which had been made to us of a great number of stuffed Irish birds. There was a feeling that we should act in harmony.

313. *Chairman.*] Is it the wish and feeling of the members of your society, and of your council, that your 500 *l.* grant should be included in the estimate for the Royal Dublin Society?—It is a matter of perfect indifference to us; I have conversed with the members of the council about it; we do not care in what way the grant reaches us.

314. If that grant reached you in another way, should you then continue those privileges to the members of the Royal Dublin Society?—That I cannot say.

315. Do you think those privileges to the Royal Dublin Society are any loss whatever to your society?—I should be inclined to say not.

316. At this present moment, the object of your society is to fence in the other side of the pond?—Yes.

317. How are you proceeding to effect that object?—In the year 1832 Mr. Decimus Burton, who was then, I think, architect for some department of the Government, laid out a plan for our garden; and it was then part of his proposal that the pond or lake should be included, because unless that were done our gardens would remain as they have up to the present time, subject to depredations committed by the deer of the park, which cross the lake in numbers at night, and eat our shrubs and trample down the flower beds; and the water fowl and the aquatic birds are exposed to being hunted by dogs, and pelted by mischievous boys. But repeated delays occurred, and obstacles arose as to getting that ground, until finally, within the last few months, the Treasury, through the Board of Works in Ireland, have acceded to our repeated requests, but they have imposed what I think are hard terms upon us: they give us the ground, but they require us to erect the fence; and they not only require us to erect the fence, but they require that it should be made of a particular construction, involving very great expense; and they require us to pay for the fence according to their own pattern. Under those circumstances, the only course left open to us was to appeal to the members and to the public. Up to the present time, the members and the public have responded to our application to a considerable amount. I think we calculate that the fence will cost 400 *l.*; we have collected already upwards of 200 *l.*; and Her Majesty having been appealed to, and reminded of the benefits conferred upon the poorer classes by the gardens, has been kind enough to mark her approbation of our objects by presenting us with a donation of 25 *l.* (*The Witness handed in a Circular.—Vide* Appendix).

318. What is the amount at present contributed?—As far as I can recollect, from 200 *l.* to 250 *l.* up to the present time.

319. Have you any suggestions to make to the Committee with regard to your society?—I do not know that I have any suggestion. I have a wish, of course, that the Treasury, having laid down a pattern for us to follow, would put up the fence. It concerns them as much as it does us.

320. You think, inasmuch as they have imposed upon you certain conditions involving additional expense to that at which you might have put up that fence if left to yourselves, they ought, therefore, to contribute towards its erection?—I think they ought to contribute towards its erection.

321. You would prefer that they should pay all?—Yes.

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322. Sir *Edward Grogan.*] This particular portion of ground you are referring to I believe is in the direct road to the Vice Regal Lodge?—On the right hand of the road leading to the Vice-Regal Lodge.

323. Almost in view of the house, is it not?—I think not.

324. His Excellency or any visitor going to or from the Vice-Regal Lodge into Dublin must necessarily pass this part of the ground proposed to be enclosed, must he not?—He would leave it on his right hand going from the lodge, and on his left going to it.

325. He must pass it?—Yes.

326. Is this proposed fence an ornamental one?—Yes, an invisible wire fence, so as not to obstruct the view.

327. Could you have put up an equally effective fence at a cheaper rate?—Yes, I am quite sure we could, for the expense of the proposed fence will be 11 *s.* or 13 *s.* a yard.

328. Are the council of opinion that the proposed fence for your purposes is needlessly expensive?—Certainly.

329. Is it on that ground you think you are fairly entitled to some assistance from Parliament for the erection of that fence?—It is.

330. You have stated to the Chairman the amount of your available funds; I need hardly ask you whether there is any large surplus in your hands yearly?—I do not think we ever had a surplus; I know we are at present in debt. I know that in one year I was obliged to advance 300 *l.* to keep the gardens open.

331. If your appeal to the public, of which you have been speaking, should not be the means of raising the necessary amount of money for the fence, how is it to be provided?—We have no other way of paying for it, if the public do not respond to our call.

332. It must necessarily cripple your resources in the management of the gardens, and diminish the ability of the institution as a means of public instruction?—Very much, because we cannot keep water fowl unless we have a fence; we cannot carry out the objects of the society as an Acclimatation Society (improved breeds of water fowl suitable for human food being one of the purposes of the society), unless we have that fence.

333. If Government consented to put up this fence for you, I need hardly ask whether the money you might obtain from the public in answer to that appeal, could not be beneficially employed in increasing the usefulness of the gardens?—I think it could be very beneficially employed in improving the gardens; but I think if we diverted it to another purpose, we should ask the permission of the contributors, and we are quite satisfied that they would at once give their consent.

334. Has any application ever been made by your council to the Government authorities for such assistance in the erection of the fence?—No; we thought it useless to apply to the Treasury on the subject. We were 30 years endeavouring to get their consent to enclose the ground, and if as many years were to pass over before they consented to put up the fence, we had better take it upon ourselves.

335. You stated that your council consisted of 15 members?—There are 15 members on the council at present, and five vice-presidents, who are elected annually.

336. Are they elected by the members?—Yes.

337. Is there any member of that council elected on that council because he is a member of the Royal Dublin Society?—Certainly not; I think the council has always had a member of the Royal Dublin Society upon it; I am myself a member of the Royal Dublin Society, and I think a great number of the members of the council are members of the Royal Dublin Society; but there is no rule or understanding on the subject.

338. It is not in their capacity of members of the Royal Dublin Society that they are elected on your council?—Certainly not.

339. Your attention has been called to certain privileges which the members of the Royal Dublin Society enjoy with regard to your gardens. Are those privileges given to them as being members of one of the leading institutions of Dublin, or for any other reason?—Originally there was a kind of connexion between the Zoological Society and the Dublin Society, and when the grant was given to us, it passed through the hands of the Royal Dublin Society. The Royal Dublin Society lent us their lecture rooms, and there was a very good feeling indeed between the members of the two societies, and it was considered that in different ways they were each engaged in diffusing scientific information. From all those circumstances, the privilege was given to members of the Royal Dublin Society.

340. Are you aware whether that privilege has been very largely availed of by members of the Royal Dublin Society as such?—I should say not; because if that were so, we should have a much greater number of members; but I cannot say to what exact amount it has been availed of by the members of the Royal Dublin Society.

341. It has not been availed of to any amount to make itself perceptible to your council?—I do not think it has; I think the members who wish to become members of the Zoological Society, become so from a desire to support and forward the objects of the society.

342. Quite irrespective of any advantages that, as members of the Royal Dublin Society, they might acquire by joining it?—I should say, when a gentleman wished to become a member of our society, the saving of a guinea on entrance, or 2 *l.* or 3 *l.* on the life subscription, would not weigh very much in his mind.

343. Mr. *Waldron.*] With respect to your income, I believe that you have realised some money for some years past by the sale of animals?—We have; I do not know about realised, we have got some money.

344. You spoke of the advantages offered by the gardens to artists and modellers; do many artists and modellers avail themselves of the opportunity of drawing from the animals?—I know that some do, because I see unfinished drawings occasionally there; as to the number I cannot say anything, because I very rarely visit the gardens, except on Saturday morning, for the transaction of business; and occasionally on Sunday, when, being in the neighbourhood of the gardens, I go in to see how the people are behaving themselves.

345. Do they require special permission?—It is given as a mere matter of course.

346. It is not necessary that the council should make an order?—No; we are very liberal in giving facilities for all purposes of improvement.

347. You

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347. You spoke of loss to the society from the unprotected state of the gardens; was not a seal killed sometime ago by some mischievous boys pelting it?—Yes. That has been the only instance of mischief that I have known of—of the least amount, that has occurred since we opened the gardens freely to the people, a period of 20 years. I must observe, moreover, that that act of mischief was not done on a Sunday, or at a time when people were admitted at the penny rate, but was done on a day when the admission to each person was 6*d.* It was a very exceptional case. On inquiry, we found that two boys, more respectable than the third, got into very bad company, and that the bad boy was the leader of the other two into the mischief.

348. Was it from the side that you propose to enclose that that occurred?—No; the seal was in a small seal pond in the middle of the garden.

349. In this circular you say that last year not a single water bird has been permitted to hatch its eggs and rear its young in the gardens; you attribute that to the unprotected state of the pond?—Yes.

350. And you wish the Committee to understand that, consequently, the council is not able to introduce those new breeds of fowl which it is thought so desirable to introduce in other places?—That is my meaning.

351. *Chairman.*] You cannot carry out experiments in acclimatation?—We cannot.

352. Mr. *Waldron.*] One of the objects for which the Zoological Society was established was the acclimatation of valuable animals and fowls, was it not?—That is one of our objects; but I am not sure that the acclimatation of animals engaged very much of the public attention so long back as 30 years ago. The attention of the public has only been drawn to it lately.

353. Have any efforts been made to carry out that object?—No, because we had not the means. The only way we could venture to carry it out with our present means, is with regard to water fowl. That is one of the most important branches of acclimatation of animals, because those birds live upon food not consumed either by the human race or by animals generally; but that important branch of acclimatation we have not been able to carry out, in consequence of the present undefended state of our gardens.

354. The Royal Dublin Society, I think, has always been willing to lend the theatre of their institution to your society for the purpose of lectures?—The Royal Dublin Society has always been very kind in that way; but there was always an inconvenience which the society could not remove; namely, every member of the Royal Dublin Society has a right to go into the theatre on all occasions, and consequently, when we had the use of the theatre for our zoological lectures, very many members of the Royal Dublin Society, who never contributed to our funds, took possession of the seats, and our own members were excluded.

355. Do you mean that they were not able to get into the theatre at all?—Very many of our members were excluded in consequence of the theatre being occupied by members of the Royal Dublin Society. I do not intend to blame them for it; they look upon it as a chartered right.

356. Sir *Edward Grogan.*] The theatre was not large enough to accommodate the members of both societies?—Certainly not.

357. Mr. *Waldron.*] Is it proposed to put a fence inside this wire paling?—I think not; we have taken the idea of the invisible fence from one I saw at the Bois de Boulogne, where there is an invisible fence for a considerable distance, which in no way interferes with the landscape.

358. Do you think that that would be sufficient for all purposes of protection?—I think it would, because any animals that required a stronger fence would be always in confinement; it would prevent the birds and small animals straying, and it would prevent dogs and mischievous persons getting in. I anticipate that a wire fence would be quite sufficient.

359. *Chairman.*] Do you think it is right, on principle, that where a society is supported by public grant, it should give any privileges whatever to any other society, or any other class of the community?—I am hardly prepared to answer that question in the abstract; I think it must depend very much on circumstances.

JOHN M'EVOY, Esq., called in; and Examined.

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360. *Chairman.*] YOU were the Honorary Secretary to the Committee for the opening of the Glasnevin Gardens on Sunday?—I was, in the year 1861.

361. You are also the Honorary Secretary to the Committee that was got up last year, opposing the abolition of the Irish Museum?—Yes.

362. You are also Honorary Secretary to the Stephen's Green Opening Committee, are you not?—I am.

363. I presume, from having undertaken those offices, you take considerable interest in social questions connected with Dublin?—I do.

364. What induced you to undertake the office of Honorary Secretary to the Committee for opposing the abolition of the Irish Industrial Museum?—There were two reasons: the first was, that I and those acting with me, in Dublin, did not think that the inquiry before the Commission was a fair one; and the second reason was, we considered that a gross injustice was about to be done to the middle classes of Dublin by the abolition of the Irish Museum.

365. On what grounds was it considered that the inquiry was not a fair one?—We found that the Commission was composed of four Commissioners, two of whom were on the council of the Royal Dublin Society, and two of whom were representatives of Government Departments. There was nobody to represent any other interest upon that Commission, but the Royal Dublin Society and the Government. And, moreover, the Commission was held in the Royal Dublin Society's house, in private; the press were refused admission, and the witnesses were solely persons connected with the Royal Dublin Society, with the exception of Sir Robert Kane.

366. You objected to the Commission, as being partly composed of members of the Royal Dublin Society, on the ground, I presume, that one of the objects of that inquiry was to abolish the Museum of Irish Industry, and to amalgamate it with the Royal Dublin Society, which would increase the influence and emoluments of that society?—Yes. We found that the Royal Dublin Society had previously pronounced an opinion

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upon the question; it had always looked upon the Irish Museum as a rival establishment; it had, in a communication addressed to the Government some few years before, denounced that institution. It had committed itself to opposition to the Irish Industrial Museum.

367. To what document do you allude?—I allude to an official letter sent to the department in the year 1854, which I find quoted in the report of the Commission; it will be found in Mr. Foot's evidence, at page 37.

368. Sir *Edward Grogan.*] Will you read the passage to which you refer?—"It is a matter of just surprise and regret to the society that, with such Parliamentary authority of the ability and suitableness of this institution to be made a great instrument for the diffusion of practical science throughout Ireland, Government should have deemed it necessary or economical to have established in close proximity, and for nearly similar objects, such an institution as that of the Museum of Irish Industry; but more especially is it cause of astonishment that the Board of Trade should utterly ignore all such testimony, and subject the society, without complaint or investigation, to the deprivation of all their educational staff and functions hitherto constituting the most effective means of carrying out the objects for which they were instituted."

369. *Chairman.*] With regard to the two departmental officers who were members of that Commission, was it felt that they had already prejudged the question?—Yes. The Science and Art Department had previously expressed an opinion that all institutions of that kind should be centralised in London, and that only what might be called small schools of science should be permitted in the provincial towns, one of which they seemed to consider Dublin to be.

370. Sir *Edward Grogan,*] Will you refer to the passage from which you draw that inference?—In the report of the Science and Art Department of 1853, they say "There is a disposition in large towns to erect their schools of science into institutions having more of a collegiate than a scholastic character." That is censured by them, and the chief attention of the department is announced to be intended to be directed to encouraging schools for "secondary instruction" rather than anything higher in the large provincial towns. And at pages 44 and 45 of the same report, I find a strong commendation bestowed upon the "Central School" of Science in Jermyn-street, London, as the only central school that there should be in the United Kingdom.

371. *Chairman.*] Perhaps you also refer to the Science and Art Minute; that all teachers of schools should take out their certificates at Kensington?—Yes. That is another fact from which the inference I have stated may be drawn. It is difficult to fix upon particular facts. The whole policy of the department has been in the direction of centralization.

372. Then, as regards the Treasury: was there any distrust felt, as regards an officer of the Treasury being a member of that Commission?—Yes; the Treasury might be supposed to be anxious to economize the public money by the abolition of an institution of this kind in Dublin.

373. As to the witnesses who were examined: how many witnesses were examined?—Seventeen.

374. How many of them were members of the Royal Dublin Society?—Sir Robert Kane is only an honorary member, I understand; but all the others were either actual members (the majority of them being members of the Council) or officials of the society.

375. When you say that this Commission was looked upon with disfavour in Dublin, do you mean that, among the middle classes in that city, there was a strong feeling with regard to that inquiry?—There was. I may hand in a selected list of the names of persons in Dublin who signed the petition to Parliament against the abolition of the Industrial Museum (*handing in the same—Vide* Appendix).

376. There are in this list many names of persons eminent in the law and in science?—Yes. There are persons of eminence in almost every department. There is Dr. Aldridge, lecturer on chemistry.

377. Sir *Edward Grogan.*] Where?—I think at Trinity College.

378. Do you know that he is a lecturer at Trinity College?—I think I have heard so. I know he is a gentleman of reputation as a lecturer. I find Mr. Charles Barry, and Mr. Blake, chairman of county Fermanagh; and he, in signing the petition, added, though he was not fully acquainted with the facts with regard to the former inquiry, he thought it was a subject suitable to be investigated by a Committee of the House of Commons. Sir James Dombraine signed it; the secretaries of the Statistical Society, Mr. Gibson and Mr. O'Shaughnessy, signed it; Sir C. O'Loghlen signed it; Messrs. Martin & Sons, the eminent timber merchants in Dublin, signed it; and it is also signed by a large number of firms engaged in chemical works, persons who particularly understand the necessity of the Irish Museum for chemical purposes; a number of those signed it. Jones, Arnold & Co., and others; and Paul & Vincent, iron founders; and large firms, such as M'Birney, Collis & Co.

379. Mr. *Lefroy.*] Have you given us the leading names?—I cannot say that I have; I was not prepared to give a summary of that paper, not knowing that I should be asked the question.

380. *Chairman.*] Besides this petition, were there many petitions sent in against the main object of the report from various places in Ireland?—There were, I think, 13 from various towns sent in.

381. Were they from mechanics' institutes and local literary societies?—The Limerick Athenæum sent in a petition, and also the Drogheda Mechanics' Institute; there was one from the Town Commissioners of Ballymoney, in county Antrim, and another from the Town Commissioners of Maryborough; there was a local petition from Tralee, and another from the Town Commissioners of Rathkeale; there was a petition from Drogheda, signed by the mayor and other inhabitants: there was a petition from Limerick, signed by the mayor, sheriff, Major Gavin, and others; there was a petition from Cork, forwarded by Mr. Dowden, and a petition from the Clonmel Mechanics' Institute.

382. You have stated that the reason why those petitions were presented against the recommendations of this report was partly on account of the composition of the Commission, partly on account of the witnesses being connected with the society, and partly because those recommendations, if carried out, would deprive the middle classes in Dublin of scientific education?—Yes, placing the middle

middle classes of Dublin at a disadvantage, as compared with other large cities in the kingdom.

383. Will you state to the Committee upon what ground you consider that this amalgamation would deprive the middle classes of Dublin of scientific education?—It was not suggested in the Report of the Commissioners that there should be any school of science established in connexion with the Royal Dublin Society of a similar character to that we were to be deprived of. That school of science, as I may call the Industrial Museum was given to Dublin as a sort of substitute for the fourth Queen's College proposed for Dublin in the year 1845, by Sir James Graham, and which was not afterwards given.

384. Sir *Edward Grogan.*] Where does that appear?—Sir James Graham, in his speech in introducing the measure of the Queen's Colleges to Parliament, stated that there were to be four Queen's Colleges, one of which was to be in Dublin. That was afterwards not carried out, and the Industrial Museum seems to have been established as a substitute.

385. What authority have you for saying that it was considered a substitute?—I draw the inference from the facts I state.

386. *Chairman.*] It is proposed in the Report of the Commissioners that there should still be four professors in connection with the Royal Dublin Society under the direction of its Council, giving scientific instructions to the people of Dublin, is it not?—I think it was to be almost exclusively for teaching agricultural chemistry.

387. Did it not say that there should be a professor of agricultural chemistry,' a professor of botany, and two professors in connection with mining industry?—Yes, but the laboratory would have been reduced to a very trifling affair; as to teaching practical chemistry, it would have been reduced almost to nothing, it would have been practically abolished.

388. Do you think the middle classes of Dublin would object to the Royal Dublin Society acting as a vehicle for communicating scientific instruction?—Yes, I think so.

389. Upon what ground?—They are in the first place not sufficiently represented in the Dublin Society; it is a society, the great majority of which is composed of a somewhat higher class than the mercantile class; and secondly, it is not calculated to create confidence in the mass of the people for many reasons.

390. You say it is not composed of the mercantile classes; I believe a great number of the members of the Royal Dublin Society are connected with the mercantile classes, are they not?—There are many connected with the mercantile classes, but they are overwhelmed in numbers by the other classes.

391. But any member of the mercantile class, I presume, unless there was something affecting his character, could become a member of the Royal Dublin Society if he choose?—Yes.

392. Is the disfavour with which you consider the Royal Dublin Society is viewed as a medium for affording scientific instruction rather on account of its being an unscientific body, than on account of its being exclusive?—To properly explain what I mean, I should refer to the formation of the Society, and its subsequent history. Everybody is aware that with respect to any private society or club, whatever cast it gets in its formation, it will be apt to hold it. The Royal Dublin Society was formed a century or more ago, when a different state of things prevailed in Ireland to that which prevails at present, and it got a certain cast which it retains to this day, and for a very obvious reason. Whoever founds a private society, it is they who will canvass for new members, and these will be their private friends, and that will go on in perpetuity. There are very few persons that will force themselves into any society; they must be asked to join it, and it is natural that persons of that particular class or set which formed it, and who had the control over it at the beginning of this century should be members of it still. I may hand in a list of members of the Dublin Society, classified according to their religious persuasion. It has been prepared by a member of the Dublin Society of long standing (*handing it in*).

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393. Are you of opinion that there is any feeling in Dublin that the composition of the Royal Dublin Society is in anyway sectarian?—Yes, there is that feeling.

394. Is it alleged, for instance, that they object to admit members of the Roman Catholic persuasion into the general body?—No; there is no objection to admitting them, but as I observed a few minutes ago, when a society has $\frac{9}{10}$ths of one particular class or denomination, it will be recruited from that class. The members of the Society will ask their friends to become members, and if the other classes come in, it will be almost like forcing themselves in. They will not be likely at all events to come forward and propose to join it.

395. With regard to the composition of the Council of the society, is there any feeling in Dublin that Roman Catholics are not put upon it as a general rule?—During the discussion of the question last year I published a pamphlet in which I gave the names of the members of the council, and I stated in it that there was not one solitary Roman Catholic—that was the Council last year, not the Council this year, and that was not contradicted; we had a public discussion about it, and it was not attempted to be contradicted, that there was not a Roman Catholic upon the Council.

396. Sir *Edward Grogan.*] Where did that discussion take place?—In the newspapers.

397. Major *O'Reilly.*] Did not a letter appear finding fault with your statement?—Yes.

398. Did not it go to this extent, that a certain number of Roman Catholic gentlemen, I think seven, were stated to have been at different times members of the Council?—Yes.

399. That was true I believe, that certain Roman Catholics had been members of the Council?—At some period.

400. Was not it then stated that those Roman Catholics who had formed part of the Council, had in every instance been sent up to the Council by the committees, and that none of them had been elected by the body as members of Council?—Yes, that is what was stated.

401. Was there any correction of that statement?—No, there was a correction of the first statement; and it was shown that Roman Catholics had been members.

402. We may assume that the statement was accurate, that in those instances Roman Catholics had been members of the committees, and so became members of the Council?—Yes, by being chairmen of committees.

403. *Chairman.*] This question was asked of a witness at the last examination, "Have you ever

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ever had any Roman Catholics upon the Council." The witness replied "I believe Dr. Madden who left us was a Roman Catholic." Was Dr. Madden ever upon the Council?—I think not; as well as I recollect he told me he had never been a member of the Council, and he made it a matter of complaint.

404. Did he publish a letter in the Dublin papers, stating that the reason he left the Royal Dublin Society was, that he had been a member of it ten years, and that it had been his wish to make himself useful, and to get upon the Council, and having failed to do so, he retired?—He did last July.

405. What is the number of Roman Catholics belonging to the Royal Dublin Society?—It would be impossible to give the precise number, but judging from the classification of the list of members before referred to, I believe the proportions of the two religions are about as ten Protestants to one Roman Catholic.

406. Do you think that the circumstance of there being this large preponderance of Protestants both in the direction and in the general constituency, would indispose the Roman Catholics in general to accept the Royal Dublin Society as the means of scientific education in Dublin?—Yes, I should think so.

407. Have you ever heard any expression of opinion to that effect in Dublin?—I have heard it from some of the young men who have distinguished themselves in the Industrial Museum. One of them, who has been since a science teacher, has told me that if he had only had the Dublin Society to go to to be taught, he never would have learnt anything.

408. Mr. *Lefroy.*] Will you give us his name?—Mr. Dowling.

409. *Chairman.*] Is that the Mr. Dowling who has had such success at Cork?—Yes; he told me if the Dublin Society had been his only resource, he never would have learnt anything; in fact, he would not have gone to the Dublin Society.

410. That would apply, I presume, rather to the inefficiency of the Society as a means of scientific teaching than to any objection Mr. Dowling could have had upon the score of sectarian bias?—I think he referred to both. There is a great jealousy among Roman Catholics on such questions, and they do not feel much confidence in an institution that is to so great an extent Protestant.

411. Mr. *George.*] What did Mr. Dowling say upon the subject?—That he would not have gone to the Dublin Society; he did not like it.

412. Why?—I suppose that which I have stated was one of his reasons.

413. Did he say so?—He never precisely said so.

414. *Chairman.*] Do you consider Mr. Dowling as representing the middle classes to be opposed to the Dublin Society as a medium of scientific instruction, on account of its being composed of an unscientific body?—Yes, and on account of its general policy. I think it would be impossible for the public generally of every denomination to have much confidence in the Dublin Society. I will draw attention to what is said of its policy in the Reports of the Science and Arts Departments. In the Report of 1854, page 51, it is stated "that attention was drawn last year to the desirableness of increasing the facilities for admission of the public to the Botanic Gardens, Library and Museum" (that is, to all the public departments of the Society), one additional free day was, in consequence, granted at the Gardens, but the Department complain that no alteration was made at the Library and Museum. In the Report for 1855, at page 16, the necessity for opening the Library in the evenings for the benefit of the working classes is strongly urged. The Report for 1856, at page 19, notices that the curator of the Botanic Gardens had drawn attention to the disagreeable duty imposed upon him of refusing admission to the public, so many as three hundred a day applying to him for admission who did not choose to pay the sixpenny fee demanded by the Society. A reduction to one penny was recommended by the Department, but was not complied with by the Society. In the Report for 1857, at page 12, the matter is again referred to, and the reduction in the charge again urged; and in very strong language the evening opening of the Library is insisted upon previously to granting 500*l.* sought by the Society for that department. The Report for 1858, at page 9, complains of the continued non-compliance with the recommendation to reduce the admission fee at the Gardens, and thus speaks relative to the Library:—"The time appears to have arrived when the Society should be called upon to open the Library, either free, or at a nominal subscription, for the privilege of using it in the evening, reserving the morning only for the use of members of the Society."

415. Sir *E. Grogan.*] Are those the terms of the report?—Those are the words of the Science and Art department; since 1858 the department has ceased to notice in detail the management of the Dublin Society. Then I have to draw the attention of the Committee to my personal experience in 1861, of the opposition given by the Dublin Society to the opening of the Glasnevin Gardens. We had before us the fact that Kew Gardens had been opened a great number of years to the public on Sundays, and though it had been pressed for a number of years by Mr. Haughton and other gentlemen on the Society, they nevertheless refused by enormous majorities of six or seven to one to open the gardens in Dublin on Sundays. We then appealed to Parliament and to Government, and the Government decided that the gardens ought to be opened, but the Society persisted in its opposition till at last the grant was suspended; and to show the almost fanatical degree to which the society carried their opposition, at their meeting when the question of opening the gardens was finally carried in the affirmative, the chairman, Judge Blackburne, in putting the question, told the Society that the grant depended upon their vote, and that in fact the existence of the Society depended upon their vote, yet by a majority of only 10 or 11 was the opening of the gardens carried, so that nearly an equal number of the Society were prepared to sacrifice the whole institution rather than comply with this very reasonable request.

416. Are you speaking from your own knowledge?—I quote from what was stated in the newspapers; I would wish to call attention to the anomolous state of things in Ireland, with respect to institutions under the Dublin Society. In this country, in France, and in every other civilized country, the public have national institutions which they may call their own. Every Englishman entering the Botanical Gardens at Kew, or the British Museum, feels that he stands

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on his own property, that he is under no compliment to anyone for going there. Why is not that the state of things in Ireland? We are told the place belongs to the Dublin Society; that it is their property. I do not think that is a satisfactory state of things. It has been made a subject of complaint by the Society, that they subscribe to the maintenance of the institution, while in England similar institutions were sustained altogether by the State; I think that is a very fair complaint, I do not see why in Ireland the members of the Dublin Society should be called upon to contribute anything for the maintenance of such institutions. I believe we are all placed in a false position— Government, the Society, and the public.

417. Your objection to the policy of the Society, if I undertand you rightly, is this, that it has never of its own accord sought to popularise itself, but that whatever advance it has made, it has made by pressure being put upon it by the Government?—Yes, or by popular agitation, as in the case of the opening of the Glasnevin Gardens on Sundays.

418. Do you think, for the reasons you have given, there is a strong feeling in Dublin that the Irish Industrial Museum should not be abolished?—Yes.

419. You think there is more confidence placed in the Museum of Irish Industry than there would be in the Royal Dublin Society?—Yes; and I would observe that the principle involved would seem to be precisely the same as that with regard to the old Kildare Place Society. On the same principle on which the National Board has been established, there should be no private society to direct the scientific education in Dublin.

420. Mr. *Lefroy.*] You stated that there were certain grounds of objection to the policy and conduct of the Society originally, which you say have led to many of those objections which have been entertained by the people of Dublin to the Society. Have not those grounds of objection been latterly removed by the Society, or a great portion of them?—A great portion of them have, but still we do not stand on a footing of equality with England. For example, Kew Gardens are open every day in the week; the Glasnevin Gardens are open but five days, contrary to the recommendation, I may observe, of the curator of the place.

421. *Chairman.*] You say that Kew Gardens are open every day in the week, and you say that that is not the case with the Glasnevin Gardens?—Yes; Glasnevin Gardens are only open five days free, two days at the charge of sixpence.

422. Do you think that charge of sixpence prevents persons from going?—The curator in his evidence before the Commission of 1862, stated that he had to turn away numbers of people who came there on the sixpenny days, thinking that it was free; they came on the wrong day, in fact.

423. Will you read the opinion expressed by the curator with regard to the shutting of the gardens upon the two days of the week?—"I would respectfully beg to suggest that the gardens should be open to the public on every day of the week, free of charge, as at Kew and Edinburgh. We, perhaps, should require one close day, for shifting plants and for cleansing, but I would assimilate the admission to that at Kew; at present a charge of 6*d.* for grown persons, and 3*d.* for children, is made on Tuesdays and Thursdays. The total amount received during the year for these admissions is the paltry sum of 25*l.*, and for that there is an amount of vexatious disappointment to people who have mistaken the days, and who have brought their families at the expense of car hire, that you can scarcely have a notion of. I have frequently seen instances of that kind, and the father of the family obliged to return with his wife and children without being able to see the gardens, after incurring what was to him considerable expense. There is no check upon the money received; it may be all handed over, or it may not. The person at the gate is required to put a check into the box for every amount received; but that after all is uncertain. There are not two persons at the gate on these days."

424. Mr. *George.*] The curator said that one close day was necessary for shifting the plants and cleaning the gardens?—He said also that he thought the practice should be assimilated with Kew.

425. Did the curator state anywhere in his evidence, that if further funds were supplied to enable both proper care to be taken of the garden, and a proper watch kept, there would be no objection to opening the gardens every day?—He merely makes the suggestion that it ought to be done. I do not think Mr. Moore suggests anything about more funds being supplied.

426. Mr. *Lefroy.*] Can you state what is the regulation at Kew respecting the times of admission to the gardens?—Kew Gardens are open every day in the week; from one to sunset on week days, and from two to sunset on Sundays.

427. Sir *Edward Grogan.*] Do you give that from your own knowledge?—I know that those are the terms of admission in the summer. I do not know whether they are the same in the winter.

428. Are all parts of the garden and all the greenhouses open to the public?—The conservatories are open.

429. Do you know whether or not any part of Kew is reserved from the public?—I think not. As you go in there are some grounds belonging to a member of the Royal Family; but that has nothing to do with the public gardens. The whole of the public gardens is open.

430. Mr. *Lefroy.*] At Kew the gardens are open for a portion of every day, and at Glasnevin two days are reserved?—Yes, for members.

431. Sir *Edward Grogan.*] Are you quite sure that every part of Kew is open to the public. Have you not seen some of the houses labelled "private?"—The large conservatory I have always found open. I have seen some of the smaller ones shut when they have been making some alterations, or when something has been going on, which, I suppose, led to their being shut temporarily.

432. Are you aware that some are never open to the public?—I cannot say.

433. *Chairman.*] Would the opening of the Glasnevin gardens every day in the week, after certain hours, involve any considerable additional expense?—I think not; but if it did I think Parliament ought to incur that expense.

434. There was an additional grant of 150*l.* given for opening on Sundays?—Yes.

435. How is that applied?—It appears on the estimates for police. I believe Mr. Moore, the curator, has had a small increase of salary; but complaints have been made by the men, in a

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Dublin newspaper called the "Morning News," that they have received no addition to their wages, though they are compelled to attend on Sundays. The officers of the society can, of course, say whether that is so or not. They complained that additional duty had been imposed upon them in rather offensive terms. They told us that we, who originated the opening of the gardens, were very ready to open the gardens, but were not ready in having justice done to them, and that they were not paid anything for their additional services. That was their complaint; I do not know whether it is true or not.

436. When the Botanical Garden was originally established, were the public admitted free?—Yes, they were. I find in the proceedings of the Society, that at the time of the opening of the gardens in the year 1800, the regulation then was, that the gardens should be open every day in the week without an order from a member, but with an order from a member on Sundays.

437. Mr. *George.*] How long did that comparatively free admission continue?—The admission seems to have been gradually restricted, till I find in 1844 the admission was free only two days in the week.

438. Sir *Edward Grogan.*] Can you say when they began to restrict the admission?—It would be necessary to read the whole history of the Society. I take it to have been gradually restricted.

439. *Chairman.*] Was the expenditure at that time larger than it is at present?—Yes; I find at that time the settled expenditure of the Society (as given in a paper submitted to Government) at the Botanical Garden was about 1,700 *l.*, with a grant of 4,500 *l.* for buildings at Hawkins-street and Glasnevin besides.

440. Sir *Edward Grogan.*] Was that a grant of Parliament to that amount?—No; it was out of the 10,000 *l.* The Society were obliged to submit to Government what they did with the 10,000 *l.* The expenditure on the establishment of the gardens was over 1,700 *l.*

441. *Chairman.*] What deduction do you draw from that?—That there has not been that extension or progress that is required in the interests of education and the advancement of the country.

442. There has not been progress in the management of the Botanical Garden?—In the expenditure on it, and in the extension of its advantages to the public. I find that Kew Gardens have advanced, under Government management, from a very small grant to something like 15,000 *l.* a year. I draw the inference from that, that under Government we would have now a larger expenditure on our public institutions, and that there would be a greater freedom of access to them.

443. With regard to the library, have you ever availed yourself of the privilege afforded to the citizens of Dublin by the Royal Dublin Society of consulting its library?—I had occasion to visit it three times only.

444. Had you any difficulty in obtaining the books you wanted?—In 1861 I went to consult the Journal of the Irish House of Commons in a particular year; I found that the Journal of the year I wanted had been removed from the library. In 1863 I wished to read the Vaccination Act then introduced by Government; I went with a member of the Society to consult it, and we were informed that it had been removed from the library by a gentleman who was not even a member of the Society; he was the editor of the "Medical Press," we were told.

445. Who gave him permission to take it away?—The porter, I suppose, or some officer of the library.

446. Major *O'Reilly.*] You were told he had got it?—Yes.

447. And that he was not a member of the Society?—Yes, they corrected the abuse at once, and had it returned.

448. It was taken away by some one who was not a member?—Yes. In 1864 I had occasion to consult the Irish newspapers between 1813 and 1815, and though in the proceedings of the Society you find they are all paid for, there were very many of them missing.

449. *Chairman.*] You are aware that the members of the Royal Dublin Society have the privilege of taking out three works at a time from the library; do you consider that there is any objection to that?—I consider that it virtually removes every work of interest from the general public, for when a book of interest is published it first appears in the members' room. Then if it is a book of interest it will be secured, and secured in turn from one member to another till it ceases to be a work of any interest; till it becomes, in fact, an old book of reference.

450. Have you ever heard any complaints against the exercise of that privilege?—I have, several.

451. What public libraries are there in Dublin?—Marsh's Library, the Royal Dublin Society's Library, and Trinity College Library.

452. What is the regulation as to admission to Marsh's library?—To Marsh's library you must have an order of introduction from some householder, but I may say it is an archbishop's library, and composed of works of very little interest to the general public; it cannot be called a popular library.

453. What is the nature of the admission to Trinity College?—It is limited to graduates of a particular standing; I do not know the precise standing.

454. Are not persons admitted by favour also?—I do not know.

455. In fact there is no public library in Dublin at this moment, where, if a person wishes to consult a book of reference, he is pretty sure of finding that book, and where he may not be exposed to the chance of its having been taken away?—The Royal Dublin Society is the nearest approach to a free public library, and it is defective on that ground.

456. Do you think, inasmuch as this library is supported by Government grants, that, under those circumstances, those privileges should be done away with, and that the public should have free access to every book belonging to that library upon certain terms of admission?—I think so.

457. Have you any remarks to offer as to the selection of books?—It is objected to that the books are selected by a Committee of the Society, and that works that the members of that Committee do not take much interest in are habitually not selected. Among those, I have had my attention drawn to is a work of Sir John Rennie, a standard book on the harbours of refuge of the United Kingdom. Just before I came here I was speaking to Mr. Hemans, the engineer, who told me that that is a book which should be in every public library in the United Kingdom. I

am told it is not in the Royal Dublin Society's library, and that is an example of sectional selection.

458. How would you propose to remedy that objection with regard to the selection of books?—I think it is a Governmental function. Under the national system of education, the managers of the smallest national school are not permitted to select their books. This Royal Dublin Society's library is actually the only library in Ireland supported by public grant, and it seems a strange thing that they should themselves have the power of selecting the books.

459. Sir *Edward Grogan.*] In the greatest public library in the world, the British Museum, who is the person who selects the book?—I suppose it is the trustees.

460. Is it not the librarian?—I suppose under the authority of the trustees.

461. Is the library of the Royal Dublin Society a library that has any distinctive character with regard to the books that are selected; take books of theology, for instance; are there not in the library Catholic books, and Protestant books, and books of other denominations?—I see, from the reports of the Society, that they have recently received a large donation of books from the Rev. Dr. Joly.

462. Mr. *George.*] Do you know that Mr. Joly is a "reverend?"—I believe he was chaplain to the late Dr. Whateley. If my recollection serves me, Dr. Joly was called the "Reverend Dr. Joly." I may be wrong. I find donations of books from clergymen on one side, but I find it is impossible to have them from the other side, because clergymen of the other side are not members of the Society, and have not connexion with it. It is not likely they will ever receive books from Roman Catholic priests.

463. Mr. *Lefroy.*] Why do you say it is not likely that they will ever receive books from Roman Catholic priests?—There is not a single Roman Catholic priest a member of the Society.

464. Are they excluded by any rule?—No; the Society would be happy to have them.

465. Major *O'Reilly.*] Was a Roman Catholic clergyman ever excluded?—There was a case of that kind.

466. Sir *Colman O'Loghlen.*] Before 1836 the Archbishop of Dublin, Dr. Murray, was blackbeaned, was he not?—Yes.

467. On that ground, some degree of unpopularity arose?—Yes.

468. Mr. *Lefroy.*] There has been no blackbeaning since?—Two, I believe, have been excluded, but not on religious grounds.

469. Major *O'Reilly.*] Are you aware whether any Roman Catholic clergyman since that blackbeaning has tried his chance?—I do not know.

470. You have no reason to think that any one has?—No.

471. Sir *Edward Grogan.*] Do you know whether any Roman Catholic clergyman ever attempted to enter the Society?—I do not know.

472. Do you know whether or not one is now a member?—I do not see any Roman Catholic clergymen on the list of members.

473. Mr. *Cogan.*] If there is no Roman Catholic clergymen on the list, is not that a conclusive proof, either that none have sought admission, or, if they have sought admission, that they must have been blackbeaned?—Either the one or the other.

474. Mr. *George.*] Do you mean to intimate to the Committee, that there ever has been any Roman Catholic clergyman except in the instance of Archbishop Murray, to which a member of the Committee has alluded, who has been blackbeaned at the Royal Dublin Society?—I have no reason to think that there has been.

475. The second alternative, therefore, does not exist at all, so that if there are not Roman Catholic clergymen members of the Society, it is, in your judgment, because they have not applied?—I should think so.

476. *Chairman.*] With regard to the Natural History Museum, is there any desire felt in Dublin that an entrance should be made to it through Leinster Lawn?—Yes; I have heard a great many say, that that should be the entrance to the New Natural History Museum.

477. Is it a matter of any importance at all?—I think if the object be to attract the greatest possible number of people to visit the Museum, the entrances should be as convenient as possible.

478. Is the present entrance of that character that it would deter persons from going into the Museum?—Not absolutely deter them, but by forcing them to go a round-about way it lessens the number of persons who would visit the Museum; you must go round by Kildare-street, you must go through the house, and through a circuitous passage to reach the Museum on Leinster Lawn, instead of going to it direct from Leinster Lawn itself.

479. Was there ever an intention to erect the statue of the Prince Consort on Leinster Lawn?—I have been informed that the Prince Consort Memorial Committee applied for it. I do not speak from certain knowledge, but merely from rumour.

480. When you say rumour, do you mean what has appeared in the public prints?—No; it has not appeared in the public newspapers that any formal application had been made, but it has been suggested over and over again in newspapers, that it was a proper site.

481. Mr. *George.*] Was any application made to the Royal Dublin Society to alter the site to be appropriated for the Prince Consort Memorial?—I have heard a rumour that there was.

482. You do not know it?—No.

483. You cannot inform the Committee from whom you heard that rumour?—I heard from members of the Society that they had been debating it in the Society, and that the Society could not make Leinster Lawn public, if the Memorial Committee required it to be made public.

484. *Chairman.*] Was the objection to the giving of that site on the ground that by doing so, it would make Leinster Lawn public?—Yes, I have heard so.

485. Sir *Edward Grogan.*] Is it your impression that that application was ever made to the Society?—I think it was.

486. Could there have been that answer you have just stated, unless that application had been made?—No.

487. *Chairman.*] I think the National Gallery has been thrown open to the public upon Sunday?—It has.

488. Is there any feeling among the citizens of Dublin, that the Museum should be thrown open

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open also?—All who supported the opening of the one, would support the opening of the other.

489. Do you think that many persons would visit the Museum if it was thrown open on Sundays?—Yes; a very large number visit the National Gallery.

490. With regard to the library, is it open on Sunday?—No.

491. Are the persons who are in favour of opening the Museum on Sunday in favour of opening the library on Sunday, too?—They are.

492. Would there be many readers attending it in case it was opened on Sunday?—I do not think there would be so many as would visit the Museum.

493. Is the library a thing that would be frequented by the public on Sunday?—Not by many, only by students. There is a library in Dublin open on Sundays; the Dublin Library, in D'Olier-street; and I know, as a matter of fact, that some persons go there to read on Sundays who could not go on any other day.

494. Mr. *George.*] Are you aware that, on the 10th of February 1863, the Royal Dublin Society reported, that "the Council having taken into consideration the preference of the Society as to whether it will not be desirable to offer to the Committee of the Albert Testimonial a site for the memorial on Leinster Lawn, beg to report that, in their opinion, it would be desirable to offer the premises of the Society for the purpose of erecting the Albert Testimonial thereon." Is that consistent with the rumour you have just given to the Committee?—It is, quite; it was, that they would give the site provided the lawn was kept closed.

495. Is that proviso your own or that of the Society?—It is not stated in express words by the society.

496. Sir *Edward Grogan.*] Is it stated in any words; will you state upon what it is you base your inference?—My inference is not drawn from this; but I may refer to Mr. Maunsell's evidence.

497. The resolution of the Society has been read to you, and then you are asked to point out, from the resolution itself, any words you base your inference upon?—In this report the Society agree to give a site on Leinster Lawn for the Albert Testimonial.

498. Without restriction?—Yes; and Mr. Maunsell stated in his evidence that the Society could not open Leinster Lawn to the public. I think the inference from that is this, that it was on the condition of its being closed.

499. What is the date of that resolution?—February 1863.

500. When was Mr. Maunsell examined?—Last Monday.

501. Consequently, how can that resolution hang upon Mr. Maunsell's evidence?—I do not think the Society entertained a different view then from what they do now.

502. Major *O'Reilly.*] You have been asked whether that resolution is consistent with your statement that the granting of the site would be conditional on keeping the ground closed. I ask you the question, is there anything in that resolution inconsistent with your statement?—Nothing.

503. Sir *Edward Grogan.*] The resolution you have just read is an unconditional offer of permission to erect the Albert Testimonial on the premises, if the committee of management of such statue should think proper to do so?—It appears so.

504. Sir *Robert Peel.*] You have taken considerable interest in various matters connected with Dublin, and, among others, in its industrial and scientific institutions?—In social questions generally.

505. What is your occupation?—A candle manufacturer.

506. You have been, I think, mixed up with other agitations than that connected with the opening of the gardens at Glasnevin on Sunday?—Yes; I was connected with an agitation with respect to the registration of births, deaths, and marriages.

507. When you stated that you thought the Commission instituted by the Treasury in 1862 was not a fair one, you gave that as your impression of the general opinion in Dublin; not as your own opinion?—As the general feeling.

508. That it was not a properly constituted Committee; that it was one-sided, in fact?—Yes.

509. That was the opinion generally entertained, was it?—Among people I had an opportunity of speaking to.

510. You stated that the witnesses examined before that Commission were exclusively persons connected with the Royal Dublin Society, with the exception of Sir Robert Kane?—They were.

511. Are you aware whether anybody else applied to be examined before the Commission, and was refused?—I am not aware of that.

512. You said that the Royal Dublin Society considered the Museum of Irish Industry a rival institution?—Yes.

513. Do you think they are justified in considering it a rival institution; was not it formed for other purposes than those for which the Royal Dublin Society was formed?—Yes. If they would draw a line of distinction firmly between the two, they might go on together without interfering with one another or clashing.

514. There was a feeling in Dublin that as the Department of Science and Art were anxious to put all these kindred institutions throughout the kingdom under a central establishment in London, it would be lowering Dublin into the character of a provincial town?—Yes.

515. I would infer from what you have said to-day, that there would be much greater confidence, as a popular institution, in the Museum of Irish Industry than there would be in the Royal Dublin Society?—Yes, there would be; that is, among all classes.

516. You have referred to a petition presented to Parliament against the amalgamation, signed by a number of gentlemen throughout the country?—Yes. The memorial to the Government was signed by 46 Irish Members of Parliament of all politics against the amalgamation.

517. You mentioned the case of Mr. Dowling. What you meant to tell the Committee was, that he had mentioned to you that he felt that if there had not been a popular institution like the Museum of Irish Industry, and he had only been able to avail himself of the opportunities supplied by the Royal Dublin Society, he would not have had the opportunity of acquiring the information he had gained?—If it had not been for the Industrial Museum, he would have had the Royal Dublin Society only, and therefore he would not have had a practical teaching such as he had in the Museum of Irish Industry; and perhaps religious jealousy

jealousy may have been in his mind when he said he would not go to the Royal Dublin Society at all.

518. He is a Roman Catholic?—Yes.

519. In fact, we may infer from your observations that the Royal Dublin Society has never, as it were, gone in advance of the public opinion in Dublin, but has always been forced, as it were, unwillingly, to adopt a liberal policy towards the public through the pressure of public opinion?—Yes, it has been dragged on, instead of leading.

520. Sir *Edward Grogan.*] I understand it to be your opinion, that the inquiry of the Treasury Commissioners in the year 1862, was unfair, on the ground of the constitution of that Commission?—As one of the reasons.

521. Inasmuch as two of them were members of the Royal Dublin Society?—On the Council of the Royal Dublin Society.

522. Those gentlemen were the Justice of Appeal, and Sir Richard Griffith?—Yes.

523. Do you know those gentlemen, personally?—Not personally.

524. You know them by character?—Yes.

525. Have you any reason to suppose that the fact of their being members of the Royal Dublin Society, would bias them in the performance of their duties as Commissioners?—Every man has his bias, no matter how high his position; he has his political and religious bias.

526. Sir *Robert Peel.*] In saying that you considered that the Commission was rather one-sided, you did not intend to impute anything against the character of those gentlemen?—No; I would think them incapable of doing anything improper.

527. Sir *Edward Grogan.*] You have just stated that you considered that those gentlemen, with reference to whom the question was put, had their bias?—Yes. I think all men have their bias; I consider that all biases, and all parties, should be represented on a Commission of that kind; that it should not be confined to one set of opinions, but that all opinions should be represented on it.

528. When you state those gentlemen, whose names have been mentioned have their bias; do you mean that that would induce them to do in such a capacity, as that of Commissioners, anything that would be wrong?—Not what they thought wrong.

529. You objected also to the two other members of that Commission?—My objection is, that they had not others joined with them to counterbalance their leanings; they would be very satisfactory members of a Commission, in conjunction with others representing other interests.

530. The other two members of the Commission were Sir Charles Trevillyan and Captain Donelly; who is Captain Donelly?—He is an Inspector of the Science and Art Department.

531. He is the representative of the Science and Art Department?—Yes.

532. Under whose auspices, and under whose control, was the Irish Museum established?—Under the control of the Government; it is now under the Science and Art Department.

533. So that in the case of Captain Donelly, it was the Government sending their officer to inquire into the conduct of their own child?—Yes.

534. Do you see any objection to that?—I see no objection, if other interests were represented.

535. What other interests?—I would say the popular interests.

536. What have popular interests to do with the Royal Dublin Society?—We have to pay taxes; we have to contribute towards the support of the Society, and should have some voice in its management, and in any arrangement that may be made about it.

537. Are you a member of the Society?—No.

538. The Museum of Irish Industry was established by the Committee of Council on Education for Science and Art?—It was not established by that body; it is now under their control.

539. It is to them that they report?—Yes.

540. It is through that Committee that the Museum of Irish Industry receives its funds?—Yes.

541. Do you conceive it to be strange and improper that a confidential officer of that body should be sent over to examine into the proceedings of that establishment?—No, I think it is not improper, if the representatives of the views of the Science and Art Department, with regard to science teaching, were counterbalanced by others holding other opinions.

542. *Chairman.*] Do you consider that Captain Donelly, as belonging to the Science and Art Department, in any way whatever represents the Museum of Irish Industry?—Certainly not.

543. Sir *Edward Grogan.*] Are you aware of what were the original objects of the Museum of Irish Industry?—It was founded for geological purposes; it was called the Museum of Economic Geology at first, but afterwards it was gradually changed into its present condition.

544. When are you speaking of; its original institution for geology?—In 1845 it was called the Museum for Economic Geology.

545. Have you ever seen the Report of Dr. Lyon Playfair, in 1854, on that subject?—I think I have.

546. Will you read that passage (*handing it to the Witness*)?—"My Lords thereupon determine the limits of the Museum of Irish Industry, and direct that its collections shall in future be confined to the illustrations required by a Technological Museum, having reference to the industrial arts, and to such collections as may arise during the progress of the Geological Survey, with which it is connected. They further direct, that its library be limited to such works as are requisite for officers of the Museum in discharge of their immediate duties, and that a general library shall not be collected in connexion with that Museum."

547. That being the object of the Society, can it be any wonder that the Department of Science and Art should appoint Captain Donelly as their representative on that commission, in order to inquire how far their rules and regulations were carried out?—I think it very proper and very necessary that they should from time to time inquire.

548. Why then do you say that the Commission was unfair?—Captain Donelly represented the views of the Science and Art Department, which I take from their own Report to be centralising, for they have stated that they wish to have but one college of chemistry in the United Kingdom in Jermyn-street; and for that reason, they are anxious to reduce Dublin to the position of having only a small secondary school of science, such as that proposed to be established under the Royal Dublin Society.

549. What

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549. What was the school proposed to be established under the Royal Dublin Society?—In the Commissioners' Report, they recommend "there should be, in our opinion, two professors attached to the Royal Dublin Society in connexion with agricultural, and the same number in connexion with mining, industry. The two former should be — 1st. The professor of agricultural chemistry, who is already on the establishment of the Royal Dublin Society. His salary should be raised to the usual rate of 200 *l.* a year, and he should be allowed an increased sum for chemicals, and should be aided by the assistant chemist, now at the Museum of Irish Industry; and, 2d. The professor of botany, whose lectures have an important bearing upon agriculture, especially in relation to the practical operations at the Botanical Garden. He is at present employed in connexion, both with the Royal Dublin Society, and the Museum of Irish Industry."

550. Do you consider that the establishment of those professors, and endowing them on a more liberal footing, could be regarded as reducing the City of Dublin from the position it occupies as the metropolis to the condition of a principal town?—Yes; by giving us only a secondary science school, under a private society, instead of a Governmental college of science.

551. Why did you say that the object of inquiry was to abolish any of the institutions in Dublin?—I presume that was intended, from the way in which the whole inquiry was conducted.

552. That is your opinion?—Yes.

553. You stated that the Royal Dublin Society have manifested a jealousy of the Museum of Irish Industry?—Yes.

554. And you read a passage from a letter from their secretary on the subject?—Yes, an official letter.

555. Will you read that passage from the same letter (*handing the Report to the Witness*)?—"We have been desired to state, for the information of their Lordships, that the minute in question has been received and considered with the deference and respect to which every communication emanating from any department of Government is entitled; but inasmuch as most important changes in the character and constitution of the Society appear to be contemplated by their Lordships, and are now announced for the first time as conditions, without previous communication or any official inquiry to demonstrate their urgency or justice, the Society do not consider it will appear disrespectful to their Lordships if, in such a case of surprise, they have unanimously determined to remonstrate against some of those conditions, which they regard as proceeding from a misconception of the history and constitution of this body, and inadequate to obtain their proposed objects."

556. Is that a letter remonstrating against so large a change in the duties and functions of the society, without any previous communication with them?—It is.

557. Was not it rather a natural remonstrance for that body to make?—They were, of course, displeased.

558. Was it a natural remonstrance for them to make?—Yes.

559. Is it because they made that remonstrance that you say they were necessarily jealous of the rival institution?—No; the passage I read sometime ago is the passage I rely upon.

560. Does that follow the previous one?—Yes.

561. Would it not have been fairer for you to have read the previous passage before you read the subsequent one containing the remonstrance?—The passage I read was all that I required to read.

562. *Chairman.*] The passage speaks for itself?—Yes. It is impossible to read it otherwise than as hostile to the Industrial Museum.

563. Sir *Edward Grogan.*] You said that the public were not sufficiently represented in the Royal Dublin Society. Is there any difficulty whatever in any member of the public at large who is otherwise qualified for admission, getting into it?—Nothing but the payment of five guineas, but it is not every body who has five guineas to spare.

564. Are there any other difficulties in becoming a member except the payment of five guineas?—No.

565. Cannot persons become members of the Society on payment of two guineas?—Persons who pay two guineas are merely associate members who have not the full privileges of the Society.

566. What are the privileges which they have not?—They have not the right of voting.

567. They have no right to interfere in the management of the Society, to which substantially they do not contribute?—Not, as well as my recollection serves me.

568. But they enjoy all the other advantages which the society is capable of conferring, equally with the other members?—I think so.

569. You used the expression that there was a certain cast prevailing through the members of the Royal Dublin Society; will you explain a little more fully what you mean by the term "cast"?—I mean that the Society when founded received a certain cast. It was moulded in a certain way; it was formed by persons of certain political and religious opinions.

570. When?—In the year 1731. The words of its charter would show one that it must have been formed by persons of a particular set of opinions, for the object is stated to have been, for the purpose of promoting industry in Ireland, and extending affection to the House of Hanover. Something of that kind, to make people loyal to the House of Hanover; so that at that period of history, persons joining must have been of a particular set of opinions.

571. That, in plain English, is encouraging loyalty?—To the House of Hanover.

572. You stated that in your opinion the Society was rather sectarian in its composition?—Yes. I think it is the unhappy consequence of being founded at that period, and continued without any fundamental changes in it; it has been handed down to us with a cast in that direction.

573. That is the opinion you have formed from your reading?—Joined with what I find in the present constitution of the Society.

574. Have you any reason to say so, from either your own experience or the experience of any immediate relations of yours, who have been unable to enter the Society?—No, I do not know anybody who has ever been refused.

575. You alluded to a letter which was written by Dr. Madden; did he withdraw that letter afterwards?—Not that I know of.

576. As

576. As to Mr. Dowling, whose ability as a teacher we all know; did he say that he could not learn anything at the lectures of the Royal Dublin Society?—That they would have been of no use to him.

577. Do you know whether any of the students of Trinity College ever attend those lectures?—I have heard that some do. I think that I have seen it stated in some of the reports of the Society; I think the Commissioners refer to it.

578. Have you ever attended those lectures yourself?—I have.

579. Are they instructive?—They are instructive; but, I think, if I wanted to learn chemistry, I never could learn it by attending lectures; I should go into the laboratory.

580. As far as the lectures go, they impart information to the students who attend?—Superficial information.

581. Did you ever attend one of the paying classes connected with the lectures?—No.

582. Are you aware that instruction is given in the laboratory?—I have heard so; but a very small number attend.

583. You have heard that they are taught in the laboratory?—Yes, a small number; but a very small number.

584. Those who pay certain nominal fees to the professor?—I have heard of only two paying fees in the laboratory connected with the Royal Dublin Society.

585. It is not necessary to pay any fee in order to attend the public lectures given in the Society?—No.

586. But if they wish for any special instruction, such as is given in the laboratory, they are required to enter the class?—Yes.

587. And to pay a certain fee for that class?—Yes.

588. It is optional, on their part, to attend that class?—Yes.

589. If, therefore, the number were as limited as you state, viz., only two, would it not be because they did not choose to pay the fee?—Yes.

590. Is it within your knowledge that any members of the society, who wish to attend those special classes, have likewise to pay the fees?—I believe members do not pay the fee, but I am not sure upon that.

591. As to Mr. Dowling, he could hardly complain of not having received any education from the Royal Dublin Society, when, for other reasons, he did not think fit to attend their lectures, could he?—He did not think that their course of teaching would have led to his acquiring the same amount of knowledge that he acquired under the Irish Industrial Museum classes.

592. He did not make the trial?—He did not.

593. You spoke of some feeling of sectarian jealousy, which possibly may have operated on Mr. Dowling's mind?—I supposed so; he has never expressly told me so.

594. With regard to yourself, when you attended those lectures, did you see or hear anything that was objectionable to your feelings?—No.

595. If the fact be that Mr. Dowling had that feeling, do you think now, from your own experience, that that was well-grounded?—No; I do not agree with the view that there would be interference with anyone's religious opinions, but I think a great many others are not of that way of thinking.

596. I think you read from some report, which recommended that the library should be open to visitors, generally, in the evenings?—Yes.

597. And that members should have the exclusive privilege in the mornings?—The words of the report are: "The time appears to have arrived when the society should be called upon to open the library, either free or at a nominal subscription for the privilege of using it in the evening, reserving the morning only for the use of members of the society."

598. Are the public admitted to read in the library in the daytime now?—They are on a member's order.

599. Did you ever read in the library?—I have been there three times.

600. Did you get a member's order?—Yes.

601. Did you find any difficulty in obtaining a member's order?—No; I happen to be acquainted with a great many members, but I may have acquaintances that the majority of people in Dublin have not.

602. Have you ever heard of any person who, in his own opinion, was a proper person to be admitted, having made a complaint that he experienced difficulty in getting a member's order?—No; I have not heard any complaint of the kind.

603. In fact, have not the Society, with a desire to meet the wishes of the public, opened their library during the day to the public, going, in that respect, further than the recommendation of the Commissioners which you have just read?—The recommendation appears to me to be, that, without a member's order, it should be opened in the evening.

604. If the department recommended the privilege of using it in the morning to be confined to the members themselves, have not the Society gone beyond that recommendation in opening it to the public in the day time?—No; this report recommends a charge in the evening, but leaves the present system, as regards the morning, in existence still.

605. Does it say so?—It does not expressly say so. I should scarcely think that they intended to recommend the exclusion of the public altogether in the mornings.

606. *Chairman.*] Does it mean "reserving it to the use of the members only," or "reserving the morning only"?—"Reserving the morning only."

607. Sir *Edward Grogan.*] "For the use of the members?"—Reserving the morning only "for the use of the members."

608. *Chairman.*] Does that imply that other people are not to be admitted also?—I should think it would be absurd for the department to recommend shutting out people in the morning.

609. Sir *Edward Grogan.*] Do you see anything in that report requiring or recommending the abolition of the present system, that parties going to read there should have a member's order?—Not so far as the morning is concerned; but the words, "a nominal subscription for the privilege of using it in the evening," seem to imply that those who pay that subscription should not have to ask for a member's order, but that they would go in as a matter of right.

610. Have you ever read in the British Museum?—No.

611. Do you know anything about the regula-

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tions as to admission to the British Museum?—I only know what is published in their rules.

612. They are liberal in their admissions?—Yes; any two householders can, by certifying to the respectability of a person, procure his admission.

613. Can any two householders admit him?—They sign a request to admit him to read in the library; that is his certificate for admission.

614. It is his certificate of being a suitable person; does it give him admission to the place?—I suppose so.

615. Has it to go before any other officer?—Of course the librarian receives that certificate.

616. The British Museum being a Government institution, and therefore not having any large constituency which can sign admissions, take that course to secure that improper persons should not be admitted into their room?—The constituency of the British Museum are the householders and taxpayers of the United Kingdom.

617. Are there any subscribers to the British Museum who contribute an annual sum towards its maintenance?—I never heard that there were.

618. Are there any subscribers to the Royal Dublin Society who contribute towards its maintenance?—Yes.

619. Has not the word "constituency," therefore, a double meaning in regard to those two institutions?—The Royal Dublin Society have a a much smaller constituency; they have only perhaps 700 or 800 persons resident in Dublin, and pretty much of one particular class; whereas the householders are much more numerous. The number on the register for the city and county of Dublin is 14,000, and being of all classes, there would be much less chance of anybody who wanted to read in the library failing to obtain the means of admission if the householders had this privilege.

620. So I take your evidence to be that, inasmuch as all the householders of London are ratepayers, the ratepayers constitute the constituency of the British Museum?—Yes; they are the persons who support it.

621. But in Dublin the constituency of the Royal Dublin Society, consisting of some 1,200 or 1,300 people, are a constituency in a different sense?—They are a constituency in this sense, that they contribute 63 *l.* 18 *s.* 10 *d.*, as I find by their report to the library, out of the total cost, which is 930 *l.*

622. They contribute that out of their own private resources?—Yes; and they only have the privilege of giving orders for admission.

623. What amount is contributed by any subscriber to the British Museum out of his own private resources?—I believe none.

624. *Chairman.*] You spoke of there being 1,200 and odd members of the Royal Dublin Society; are not those members disposed throughout the country?—Yes; I said there could not possibly be more than 700 living in Dublin.

625. At the time when the great question of the opening of the Glasnevin Gardens was discussed at the Royal Dublin Society, when the question of the very existence of the Society was at stake, what was the number of members present?—The number was 259 who voted on both sides, and on the 2d of December 1813, as appears by the proceedings of the Society when they met to elect a professor of mineralogy, 258 members attended and voted, so that the number of those who take an interest in the Society has remained completely stationary during 50 years.

526. Mr. *Waldron.*] Do you assume that those are all the members of the Society who reside in or near Dublin?—No; many who were present on that occasion did not live in Dublin.

627. You assume that those who attended were the only members of the Society who took any very great interest on that particular question?—Yes, as it involved the whole question of the existence of the Society. If the grant had been withdrawn, the Society would have been at an end.

628. Mr. *Cogan.*] The Society comprises gentlemen residing in all parts of Ireland, does it not?—Yes, but a great many take no interest in its affairs, merely paying their subscriptions.

629. Mr. *George.*] There are many life members who do not pay subscriptions?—Yes, many persons who have paid 20 guineas as a life subscription have left the country. There are several who do not live in Ireland at all, and they are retained on the list.

630. *Chairman.*] You are endeavouring to prove, are you not, that the terms of admission to the library are restrictive, inasmuch as there is not a very large number of the members of the Royal Dublin Society, generally resident in Dublin, from whom admissions can be obtained?—Not many, and, moreover, it is not everybody who knows who is a member of the Royal Dublin Society; but everybody knows who are householders, and would know where to go if they wanted an order. It is impossible for any man not to know two householders.

631. You think that a library, supported by so large an amount of public grant in proportion to private subscriptions, ought to be thrown more open than it is?—Yes.

632. Sir *Edward Grogan.*] With respect to the passage you have just read with regard to throwing the library, in the evenings, open; do you know whether the library is at present open in the evenings?—It is open three evenings in the week.

633. Have you ever visited it on those occasions?—No; I have never been there in the evenings.

634. You would prefer that it should be open every evening?—Yes, I think it should; men engaged all day at their work cannot visit it unless it is open in the evening.

635. Do you know the reason why it is not open in the evening?—I have seen it stated by the society, that they cannot afford the expense of the gas, and the attendance.

636. Assuming that to be the fact, do you think that that is a reasonable answer why it should not be opened on the other evenings?—I think it is a very unreasonable answer.

637. Who is to pay the expense?—If, after the Department recommended them to throw it open, they incurred expense in consequence of opening it, and they turned round to the Department and said, in consequence of carrying out your recommendation we have incurred that expense, the Department could not refuse to pay it.

638. Have you ever found that they have done so in like cases?—They did so in the case of the Glasnevin Gardens.

639. After what length of time did they get the expense allowed them?—The next year.

640. Were many applications necessary before they got it?—Only one; a deputation of Irish Members

Members waited on the Government, as well as I can recollect, and they granted it at once.

641. Are you aware whether in that case was a promise or an understanding on the part of the Government, that on the society complying with the wishes of the Goverment in that respect, the money should be forthcoming?—The Government did not distinctly promise it; there was a reasonable expectation that they would grant it; there was no stipulation made with the Government.

642. Was there any promise made on the part of the Government?—No distinct promise; but the Science and Art Department stated that the cost of opening Kew Gardens on Sundays was something like 150 *l.* a-year. If the Society complied with the recommendation of the department, and incurred that expense, it was a very fair inference that they were entitled to 150 *l.*

643. You think there was nothing more specific than an inference?—I think not.

644. What complaint do you make with reference to the collection of books presented by Dr. Joly?—I merely stated this: that the way the library is formed, is by donations, and by the purchase of books year by year by the committee, the books coming in both cases from one side; I do not think it is that universal kind of library that a governmental body, acting with perfect justice, and without any regard to any particular denomination, would have.

645. You will admit that the selection of books to be purchased, must be in the hands of some responsible parties?—Some one responsible to the public.

646. Responsible parties?—Yes.

647. Responsible for the proper expenditure?—Responsible for the proper expenditure and for the selection of the books.

648. You do not object that any individual or individuals should make a gratuitous gift to the library of the society, and that the society should accept it?—Certainly not; but I think the society should be so constituted as that persons of all opinions should be induced to make those donations in equal proportions, if possible.

649. Did you ever know an instance in which a gift of books, or any other object that was fit for admission into that society, was declined?—I never heard of it.

650. Could the society, therefore, refuse a gift of books from a gentleman of opposite opinions, when they never were tendered?—No; but those persons are not likely, under the unhappy circumstances that characterise the society, to take an interest in it, or to make those donations.

651. You have given your own experience in frequenting the lectures of the society, that there was nothing whatever to give offence to you in anything you saw or heard. Do you consider the objection you have just now alluded to, on the part of others, is well founded?—I think there is foundation for it.

652. In what respect?—I think, if we are to have in the public library only books selected by one particular set of people, having one particular set of opinions, that collection will be apt to be one-sided.

653. Is the collection of the Royal Dublin Society one-sided?—I have not examined it sufficiently to be able to say so.

654. Why do you entertain the impression, when you have no knowledge upon the subject?—For the reason I state, that all the books come from one side I do not think it is likely to be all-sided.

655. You spoke of an objection raised against the society, in connection with opening the Botanical Gardens on Sundays, that the men were never paid for their extra work on the Sundays?—They published a letter in the "Morning News," but whether the complaint was well-founded I cannot say.

656. Was the objection that the men would have extra work on the Sunday for which they probably would not be paid, one of the reasons urged against the opening of the Gardens on Sunday on the part of the society?—They objected to the expense as one of the reasons. The department met them, by saying that it cost only 150 *l.* a-year to open Kew Gardens on Sundays.

657. Was there any objection that the men would be obliged to work and probably not be paid?—Yes.

658. *Chairman.*] By whom was that objection made?—By the Dublin Society.

659. In what form?—In an official communication to the department, and in various other ways.

660. Sir *Edward Grogan.*] You complain that the Botanic Gardens did not, in your mind, keep pace with the progress of the age, in the way of improvement and affording advantages to the public?—Yes.

661. Does it appear to you that if, at the commencement of this century, the public grant was 10,000 *l.*, and is now very little more than half, that would explain why it is not so perfect in all its departments as we would wish it to be?—The reducing of the grant has led to this imperfect state of things with regard to all the departments of the Dublin Society.

662. Your evidence goes to the extent that there ought to be more liberal treatment with regard to these institutions in Ireland?—Yes, first placing them on a proper foundation. As to the reduction of the grant, the society received 10,000 *l.* a-year Irish up to 1819. In the two years before the reduction which then took place, the subscriptions of the members had fallen off to 56 *l.* a-year. That appears in the Appendix to the Report of the Committee in 1836, and that appears to be the reason of the reduction. In 1817 and 1818 the subscriptions were only 56 *l.*

663. You have stated that, in your opinion, an entrance should be made to the Museum from Leinster Lawn, and that Leinster Lawn should be thrown open, to afford a more convenient entrance for the public into the Museum; what public do you allude to?—Every one who choose to go into it.

664. Does everybody live on that side of Dublin?—No.

665. Do the majority live on that side of Dublin?—No.

666. Do the majority of those who, in your opinion, would resort to the Museum, live on that side of Dublin?—Merrion-square is a greater thoroughfare than Kildare-street.

667. The great population at Dublin does not reside to the eastward of Merrion-square, does it?—There is a great population on that side. I would not close the Kildare-street entrance; I would have that open also.

668. Is it on the ground of a convenient access to the Museum that you advocate the opening of Leinster Lawn?—That is one of the reasons.

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669. What are the others?—Leinster Lawn might be utilised; it might be made a beautiful little place for promenade, and might be made the site of the Albert Statue, and all the unhappy differences we have had about the Albert Statue would be at once got rid of.

670. Your attention has been called to the fact that no application has been made to the Dublin Society, and therefore refused by them, with regard to the erection of that statue?—They have never refused.

671. Does not, therefore, the non-erection of the statue on this site depend upon the committee who have undertaken the erection, rather than on the Dublin Society?—It is the same as with the Stephen's Green Commissioners; they refused to open it to the public; that is the reason the statue was not erected there.

672. The committee wanted something more than liberty to erect the statue; they wanted to take the property?—They wanted to have it open to the public.

673. With regard to books being taken away by members, you gave us an instance of some particular book that was not to be had in the library. The Vaccination Act, had that been taken away from the premises?—Yes.

674. Did it ever come back?—Yes, after we complained of its removal.

675. Was it one of the members who took it away?—No.

676. Was it some gentleman who had the privilege of frequenting the rooms that borrowed it?—Yes.

677. *Chairman.*] Are you aware in what manner the book was taken away; was it taken away surreptitiously, or was the person permitted to take it by any official connected with the society?—Yes, the official knew he had it.

678. Who was the official?—The attendant in the library.

679. Mr. *Waldron.*] Was it on a Saturday night that this was lent to the editor of the Medical Press?—I do not know.

680. Did not the librarian tell you that he came late in the afternoon, just before the library closed on Saturday, and that he lent the Act to the editor of the Medical Press, to look through, on the promise that he would bring it back early on Monday?—He made no explanation of that kind; he merely stated that it was not to be had.

681. No explanation was given to you?—No.

682. Was a gentleman, named Dr. Barry, with you?—Yes.

683. Sir *Edward Grogan.*] You merely state the fact that you asked for it, and that it had been withdrawn, and you could not get it?—I could not get it at the time; in about 15 minutes or 20 minutes it was got.

684. Did I rightly understand you to say, that there was greater confidence on the part of the public in the Museum of Irish Industry than in the Dublin Society?—I refer rather to the principles of the two. I am sorry to say the Industrial Museum is not very popular in Dublin; that is, under its present management, but the principles upon which it is founded we consider to be the proper ones.

685. You consider that there is greater confidence on the part of the public in the Industrial Museum than in other institutions in Dublin?—I consider that that institution is one in which the public interests and rights can be maintained; there is no interference of any private society. If the Government choose to have that institution as efficient as it ought to be, it can make it so; but in the case of the Royal Dublin Society it will always be wrangling with the Society.

686. Have the Royal Dublin Society ever shown the slightest disinclination to follow the march of progress, in affording increased instruction to the public as far as their means permitted them?—I do not think it is consistent with the facts to be found in the Science and Art Department Reports, that they have done anything to promote the progress of the mass of the people in education.

687. You have mentioned that you have attended some of the lectures of the Royal Dublin Society with pleasure at least, if not with profit to yourself?—Yes.

688. Was the attendance on those occasions large?—No, rather small.

689. Was there any obstruction whatever to entrance?—No obstruction.

690. Do you know the interior of Ireland well?—Yes, I have travelled a good deal in Ireland.

691. Are you aware that the Dublin Society instituted a system of scientific lectures in the provinces?—I thought that was established by the Government in 1854.

692. Your opinion is that it was established by the Government?—Yes.

693. Had the Dublin Society anything to say to it?—They had something to say to it; they had a controversy, and claimed some right of nominating, or having their own professors appointed.

694. Do you know who the professors are who give those provincial lectures?—I know some of them.

695. Are they connected with the Dublin Society?—Some of them are connected with the Royal Dublin Society, and some are connected with the Industrial Museum.

696. Who are the moving cause in giving those provincial lectures throughout the country?—I do not know what the Dublin Society have to do with it precisely.

697. You are unaware whether they have anything to say to it?—Yes.

698. *Chairman.*] Are you aware under what Estimate the expenditure for those provincial lectures is classed?—It is under the Museum of Irish Industry.

699. Do you believe that this committee of lectures appertains exclusively either to the one Society or the other?—The two institutions seem to be mixed up in it.

700. Was not it a matter of compromise?—There was some compromise.

701. It was arranged, I believe, by Mr. Cardwell in 1854?—I am not well acquainted with the subject.

702. Mr. *George.*] Are you aware that it is a rule of the library committee of the Royal Dublin Society that no theological book whatever shall be purchased out of the funds of the society?—Yes, I am.

703. Therefore, no works of theological controversy that could offend the religious feelings of any party are purchased out of the funds of the society, which are partly contributed to by the Government?—No; the Government, I am quite sure, would not permit it.

704. Nor do the society or their library committee desire it?—I do not suppose they do.

705. Is not that a rule of their committee?—Yes.

706. By which they are bound to abide?—Yes, I have heard so.

707. If any such books happen to get into the society, they may come through a donation given by a stranger?—Yes; but books may not be theological and yet have a bias in favour of particular opinions.

708. What kind of books do you refer to?—Works of history.

709. Do you again allude to any particular books as having got into the library, even historical works, having a particular religious bias?—I only speak of the general principle, without reference to any particular books.

710. Have you looked at the catalogue of the library?—Yes.

711. Are you able to state to the Committee that there are any objectionable books, such as you refer to in the library of the Royal Dublin Society?—No, I never went into the subject.

712. If I understand you rightly, you wish to convey to the Committee that, because there are individuals of certain principles in that society, you assume it is possible that they may add books to the library that would not be quite agreeable to others?—I think, when the books come from one side only, it is the only side that will be represented.

713. You have no knowledge upon the subject to give to the Committee?—No.

714. You object to the system of allowing members to borrow books from the library of the Royal Dublin Society?—Yes.

715. Cannot you conceive that there may be very many instances of persons engaged in compiling works, to whom it would be a great assistance to have access to those documents and books more constantly than they could have by going to the library for them?—I find authors have no objection to go to the British Museum; and they are not allowed to remove books from the British Museum.

716. Do you know that at the Cambridge Library the plan of lending out 10 volumes at a time, analogous to that at the Dublin Society, is followed and greatly approved of?—I do not know that.

717. The late Mr. Lundy Edward Foot was for many years secretary to the Royal Dublin Society, was he not?—Yes.

718. During the latter period of his life, was he one of its vice-presidents?—Yes.

719. Nobody, I believe, knew more of the affairs of the society, or of its wishes, than he did?—I have seen some compliment of that sort paid to him in one of the reports of the society.

720. You referred to the evidence of Mr. Foot, as given before the Commission of 1863, and you read a passage from a letter quoted by him. When you read that passage, did you mean to give it to the Committee as the evidence of Mr. Foot in 1863, or as an extract from a letter written as long ago as 1854?—I quoted it as an official letter written on behalf of the society.

721. Have you read the whole of the evidence of Mr. Foot?—Yes.

722. You did not mean to convey to the Committee that Mr. Foot, in his evidence in 1863 to those four Commissioners, expressed an opinion that there was a rivalry between the Royal Dublin Society and the Museum of Irish Industry, or that he in any degree disapproved of the existence of the Museum of Irish Industry?—I did not state that; but now you mention it, I do not see why Mr. Foot should have quoted it, except for the purpose of endorsing that opinion.

723. Did he express that as his individual opinion, or did he simply refer to it as a document written in 1854?—He referred to it, I should say (as you ask me the question), for the purpose of asserting that opinion again.

724. Did he state so?—In his evidence he advocates the abolition of the Irish Museum.

725. Will you look at his evidence, and show me a word to that effect?—At page 41, he is asked, "Part of the lectures under the committee of lectures are delivered here, and part in the Museum of Irish Industry; is that a satisfactory arrangement"? He answers, "I cannot conceive why there should be lectures in both places. The circumstances connected with this are explained in the extracts I have already read from the letter from the Science and Art Department, and our remonstrance. I am aware of the nature of the collections here, and in Stephen's Green. I think it is most desirable that they should be consolidated, and that the consolidation should take place, because the Museum of Irish Industry has not attached to it the public confidence and regard. There are no members attached to it, while that is the valuable part of our society in whose operation upwards of 1,000 persons are personally interested. A single institution of the sort would be sufficient for the wants of the Society. If the transfer is made, a selection only from the Museum of Irish Industry Collection should be transferred, as many of the things they have are duplicates of ours, while we would altogether dispense with their illustrations of manufactures."

726. The passage you read before was an extract from a letter written in 1854; was not it in 1854 that the functions of the Royal Dublin Society were altered, and a joint committee was formed between them in order to have lectures delivered in the country by lecturers appointed by what is called the "committee of lectures"?—Yes.

727. And that has been acted upon ever since?—Yes.

728. The committee of lectures consists, I believe, of four members of the Royal Dublin Society, and four appointed by the Government?—I do not recollect just now the precise constitution; I know it is partly one, and partly the other.

729. I understood you to intimate to the Committee, with reference to the case of Mr. Dowling, that there was some religious prejudice that prevented the lectures of the Royal Dublin Society being as useful as they ought to be; is that what you meant to convey to the Committee?—I intended to convey that, considering the constitution of the society, he and others of his way of thinking are not so likely to attend those lectures, as they would if it were a Governmental Institution.

730. Mr. Galloway, Mr. Jukes, Dr. Barker, Dr. Harvey, and the late Dr. Kinahan, have all been lecturers at the Museum of Irish Industry, have not they?—Not all lecturers, I think, but they have all been attached to the institution.

731. Those gentlemen happen to be Protestant, do they not?—I do not know.

732. Did you ever hear Mr. Dowling object to attend their lectures, because they happened

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to be of a different religion to himself?—On the contrary, it was at the Irish Industrial Museum that he learnt all he knew.

733. He did not decline to attend their lectures on account of religious prejudice?—No.

734. *Chairman.*] If I understand you rightly, you consider that objection would lie to the Royal Dublin Society as a medium of conveying scientific education, on account of its being (no matter from what reason) composed of one persuasion, a great preponderance over all others?—Yes. In fact, the same reasons that prevailed in transferring the educational functions of the Kildare Place Society to the National Board, would justify the transfer of the functions of the Dublin Society to a Governmental Board or Institution.

735. Do you think that Roman Catholics consider that they would have a better guarantee that nothing would be done, in the way of education, calculated to offend their opinions in an institution directly under the Government?—They do.

736. Do they consider that there might be objections to a system of education which was carried on by a society through the medium of a committee, whose proceedings would have to go to a council?—The fact of a society, such as the Kildare Place Society, or the Royal Dublin Society, largely Protestant, having the management of education; a Governmental function, implies an ascendency in Ireland, hateful and objectionable in itself.

737. It is the want of direct responsibility to the Government that you object to in the education given by the Royal Dublin Society or the want of general responsibility?—I object to both the want of responsibility, and the refusal, as it were, or the neglect of the Government to insist upon the equality of all its subjects before the law, by having educational functions removed from all private societies, whether Protestant or Catholic.

738. Mr. *George.*] What do you mean by the Government not recognizing the perfect equality of every individual in respect of practical and scientific education?—If the Government place the education in the hands of a class or particular denomination, it is impossible to say that all its subjects are equal before it.

739. Have they done so?—In the case of the Royal Dublin Society they have.

740. How?—They have placed it in the hands of a private society, which is to a large extent Protestant.

741. You are not able to say that anything has never been said in any lecture delivered within the walls of the Royal Dublin Society, having the slightest tendency to annoy the feelings of any of the auditors present, or in any degree to raise any question with reference to religion?—It would be quite impossible for me to say what has taken place.

742. Have you ever heard of such a thing?—No, I have never heard anything of the sort myself.

743. Mr. *Lefroy.*] You say that one of the usual objections urged against the library is, that books have been presented to it by gentlemen of certain religious opinions, and that no books have been given by gentlemen of the opposite religious opinions?—Yes.

744. Do you attribute any fault to the society in that respect; has not it been entirely accidental?—It is an accident owing to the constitution of the society.

745. With respect to the books presented by Dr. Joly, have you any reason, from hearsay or from examination, to say that they are religious books of a particular description, or do you found your observation upon your supposition that he was a gentleman connected with the Church?—I understood he was a clergyman.

746. You have no knowledge that those are books of a religious character?—No, I merely lay down a theory.

747. If it were proved that you were mistaken, and that Dr. Joly was not a clergyman, would that alter your opinion?—No.

748. If they turned out to be books connected with scientific subjects, would you say that the society should not have accepted them?—No; I would have said that the society would have done wrong in refusing them.

749. Your observation is merely a general one?—Yes; merely as to the principle.

750. Mr. *Waldron.*] Will you read the paragraph in larger type in Mr. Foot's evidence before the Commission, at page 37?—"The society were greatly opposed to this proposition of depriving them of their educationl functions, and remonstrated against the proposed change in the following terms."

751. The letter following that paragraph, to which you have referred as proof that the Royal Dublin Society were jealous of the Museum of Irish Industry, was written with regard to the withdrawal of the educational staff of the Royal Dublin Society?—Yes; they were displeased with it.

752. And the society said, that they thought it not reasonable that the staff should be withdrawn from them, and given to a junior and less important institution?—Yes.

753. Do you think that that was an unnatural remonstrance on their part, under the circumstances?—By no means.

754. You spoke of 13 petitions having been forwarded from various towns in Ireland against the consolidation of the Royal Dublin Society and the Irish Museum; had those petitions been sent out by your Association?—Yes; they were sent out by us with circulars, drawing their attention to them, and requesting their support.

755. Were those 13 all that you sent out?—No; we sent out perhaps 30 or 40.

756. May we assume that the balance between the 13, and the 30 or 40 refused to adopt your views?—They did not refuse. They did not take any notice.

757. You stated that the mercantile classes were overwhelmed in the Royal Dublin Society by the other classes. Will you explain what you mean by that?—I mean, that the Royal Dublin Society is composed principally of professional men, or persons of a different class to the mercantile class.

758. It was in that sense that you used the term overwhelming?—Yes; I think it is shown in the council or governing body of the society, we do not find many merchants governing the society.

759. You mean merely overwhelming in point of numbers?—Yes; that the government of the society is in the hands of a class that might be supposed to take less interest in mercantile affairs.

760. You referred to certain expressions as having

having been made use of by Judge Blackburn; did you hear them yourself?—No; I saw them in a newspaper the next morning.

761. Have you the newspaper in which that report appeared?—No; I have not; I recollect perfectly well that such a statement was made by him.

762. You stated that the public had more confidence in the Museum of Irish Industry than in the Royal Dublin Society?—I should rather say in the principle of the Museum of Irish Industry.

763. The public, I presume, you take to mean, the persons with whom you are in the habit of associating?—Yes.

764. And you say that they approve more of the principle upon which that institution is governed than the principle on which the Royal Dublin Society is governed?—Yes.

765. With respect to the complaint of the labourers at Glasnerin Gardens, which appeared in a newspaper, was that signed by any names?—No; it was an anonymous letter; I give it merely for what it is worth.

766. Did I rightly understand you to say that no work of interest is ever added to the library unless it happens to meet the peculiar views, and possibly the prejudices of the library committee?—I did not say "no work of interest;" what I wish to say is, that a particular class of persons, medical men, and so on, being on this committee, they are not likely to take that extensive view in their selection of books which is desirable.

767. Do you wish to convey that you do not think that the works added to the library, from time to time, are such as the general public would take an interest in?—They are more likely to be of a class character.

768. You stated that every new work of interest was seized by one member after another till it ceased to be of interest. Are you aware that all the new works remain in the conversation-room a month after they come in?—Yes, but only members are admitted to it.

769. Are you aware that there is a book kept in the library, in which anyone can suggest a book to be added to the library?—Yes; but I do not think that the general public is privileged to make any suggestions; I think that it is confined to members.

770. Could not a person having the privilege of reading there, suggest a book through the member who introduced him?—He might, but it would be a roundabout way of doing it.

771. What more direct way would you suggest?—As in the free libraries in this country, I would have a committee of selection representing all classes and all opinions without any necessity for any pressure being put upon them in any way.

772. You would set aside the librarian and the library committee?—Certainly not the librarian.

773. You would have a committee outside the society?—I mean, if we were going to found a new public library in Dublin, I would have such a committee as I suggest.

774. What would you suggest as regards the existing institution?—It might be advisable to abolish the library committee and to carry out in principle the suggestions of the Commissioners. They suggest in their report, that the council of the society should have complete power over the management of the society; and the Commissioners consider that, having that complete power, they might be safely entrusted with the distribution of the grant, in the same way as the trustees of the British Museum. Carrying out that principle in its entirety, I would give them, with equal power, equal responsibilities to the public. I would let that council have a sub-committee, or I would let the librarian be directly responsible to it.

775. Do not you apprehend, even if you left it to the council, there still would require to be a library committee?—There might be a sub-committee appointed by the council.

776. That is what the library committee is at present, is it not?—I think it is elected directly by the society.

777. You stated that letters were written in the newspapers about the opening of Leinster Lawn; did the persons who wrote those letters sign their names to them?—No, they were generally anonymous.

778. You do not know who the writers were, I suppose?—I know some of the persons who wrote those letters.

779. Will you state in what class of life they were?—I have written letters myself, suggesting it; but I may say that those letters would not be published if the editor did not agree to some extent with the sentiments of the writer.

780. Of how many persons does your association consist?—I think there were about 20 on our committee for opposing the abolition of the Industrial Museum.

781. How many usually attend your meetings?—They did not attend very regularly.

782. What is about the average?—I do not recollect precisely; some of the meetings have been very small.

783. Major *O'Reilly.*] Sir Edward Grogan, in referring to the Royal Commission, commenced one of his questions to you with these words (though he afterwards corrected himself): "The two gentlemen named on the part of the Royal Dublin Society, I mean the gentlemen who were then members of the Council of the Royal Dublin Society;" do those words of Sir Edward Grogan exactly express your objection, namely, that they were virtually named on the part of the Royal Dublin Society?—Yes.

784. Sir *Edward Grogan.*] Have you any reason to believe that they were named on the part of the Royal Dublin Society?—I have seen it stated so in a newspaper article.

785. Have you any authority, or can you speak to any fact tending to show that the Royal Dublin Society had any hand, directly or indirectly, in the appointment of the Commission or the nomination of the members?—Nobody could know, from direct knowledge, anything on such a subject as that; I only know that it was so stated in a newspaper article.

786. Do you know who published that article?—It was stated in the "Daily Express" that those two represented the Royal Dublin Society.

787. Do you place implicit credence in every article you see in a newspaper?—No.

788. Major *O'Reilly.*] Your objection was that, in fact, they would be representatives of the Royal Dublin Society?—Yes.

789. Not that they were nominated formally by it?—No.

790. You were asked, what has the popular interest to do with the Royal Dublin Society; am I right in inferring from your evidence that one

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one of your objections to the Royal Dublin Society is that the popular interest has not much to say to it?—Yes, that is an objection to it.

791. With regard to another point upon which you were asked a question by the Chairman; in the case of a complaint with regard to an education department, which do you consider would be preferable, to have an appeal direct to the Government, as would be the case if it were a department of the Government, or to have an appeal first to a committee of the Royal Dublin Society; secondly, to the Council of the Royal Dublin Society; and, thirdly, only an ultimate appeal to the Government?—The more direct the appeal the better. I would say, that the Government, having a direct interest in promoting education, irrespective of any class, among all classes of its subjects, would be more likely to attend to such a complaint than a private society.

792. With regard to admission to the library, in the case of the Royal Dublin Society, and in the case of the British Museum, am I right in inferring that you draw this distinction, that the admission by the order of a member of the Royal Dublin Society, who himself pays for that power of giving the order, must to some extent be looked upon as a favour conferred by him; whereas, in the case of the British Museum, the certificate from two householders is looked upon as a simple testimony of the respectability and fitness for admission of the person applying, and that, inasmuch as the persons who give the recommendation pay nothing in the way of subscription to the institution, the person who gets the certificate is not under a compliment to the giver?—Just so; it is a favour in the case of the Royal Dublin Society, though not so in the other.

793. With regard to the borrowing of books from the library, one honourable Member asked you whether it was not desirable that persons engaged in compiling works should be allowed to borrow books for the purpose of reference, and he mentioned the Cambridge Library; is it within your knowledge that in the case of public libraries, such as the Bodleian Library, the Trinity College Library, and others, permission is given occasionally to writers of distinction to borrow books for the purpose of reference?—Yes, I have heard that that privilege is given.

794. Is not that essentially different from the private right of members, not necessarily persons of literary distinction, to borrow books for private use?—I quite concur that there is an immense difference between what is conceded as a matter of public necessity to a man of high literary position, and what is granted to a person contributing a few guineas a year.

795. That is the distinction you would wish to draw?—Yes.

796. With reference to the choice of books, does the same observation apply to this extent, that you think in the case of the Royal Dublin Society it may be inferred that the choice of books is to a certain extent influenced by the wishes of the members who contribute a portion of the expense, whilst in the case of public libraries the only question is the general fitness of the work for admission to the public library?—In the case of a public library under the care of a private society, such as the Royal Dublin Society, the books must be selected to a very large extent in the interests of the paying members, while in the other case I would expect them to be selected in the interests of the general public.

797. Colonel *White.*] Do not you think that the privilege which members have of taking books from the library impairs the efficiency of the library very much?—Yes; you may get a member's order to read, and when you get there you may find the book is out.

798. In fact, the public convenience is not consulted at all; a member is allowed to take away a book and keep it a fortnight, and when you come there you find the book gone?—Yes; you have been under a personal compliment to a member in getting the admission, and you find the privilege is of no value.

799. In fact, for the sake of a member reading a book at home, perhaps two or three hours a week, the public is deprived of access to the book for a fortnight?—Yes.

800. Sir *Colman O'Loghlen.*] What privileges would you suggest the members should have in exchange for their subscriptions?—I would suggest that their privileges be reduced to electing the council, and the right of admission to the cattle shows.

801. Sir *Edward Grogan.*] Would such small privileges as those be likely to induce persons to become subscribers to the institution?—The subscriptions would, of course, fall off, but the Government could very well afford to meet the deficiency.

802. No doubt they could afford to do it, but if the Government will not do it, and private subscriptions fall off, how is the institution to exist?—I think public opinion ought to be strong enough to insist upon the Government doing its duty in Ireland.

803. Are you aware that several matters, considered in Ireland to be of general public utility, have been strongly advocated by the people, and yet have not been taken up by the Government?—I am quite aware of that; but some of those claims were very badly founded.

804. Will you give any instance where a claim which you consider to be badly founded has been taken up and popularly supported in Ireland?—We have claims for many subsidies.

805. Name any one?—I think the vote of 2,000 *l.* the other day for the cultivation of flax not of the least use to the country. I do not think it will cause the growth of a single acre of flax.

Lunæ, 2° die Maii, 1864.

MEMBERS PRESENT:

Mr. Cogan.
Mr. Dillwyn.
Mr. George.
Mr. Gregory.
Sir Edward Grogan.
Mr. Leader.
Mr. Lefroy.
Sir Colman O'Loghlen.
Major O'Reilly.
Mr. Waldron.
Colonel White.

WILLIAM HENRY GREGORY, Esq., in the Chair.

Mr. John M'Evoy, called in; and further Examined.

Mr. *J. M'Evoy.*
2 May 1864.

806. *Chairman.*] I believe you wish to correct a mistake which you made in your evidence when last examined?—I stated that I understood that Dr. Joly was a clergyman; I find he is a barrister, the son of a clergyman (the Rector of Clonbologne, King's County); I confounded the son with the father.

Mr. G. W. Maunsell, further Examined.

Mr. *G. W. Maunsell.*

807. *Chairman.*] Do you wish to make a correction in a part of your former evidence, in which you gave the Committee to understand that Dr. Madden had been on the Council of the Royal Dublin Society?—Yes. I knew Dr. Madden to be a very influential and very valuable member, taking a considerable part in the discussions in the Society, and was under the impression that before I accepted the office of secretary he had been in the Council. Almost immediately on giving that answer, I was notified by a friend here that it was an error. I thought I had corrected the error at the moment, to the effect that he was not a member of the Council. I now ask the permission of the Committee to correct that error, by stating that, upon information received after I gave the answer, I find that Dr. Madden was not at any time a member of the Council.

Dominic J. Corrigan, m.d., further Examined.

D. J. Corrigan, m. d.

808. *Chairman.*] There is a passage in the Report of the Commission of 1862, to the effect that for the future it would be advisable "if all the Parliamentary grants in aid of Science and Art in Dublin were included in the estimate of the Royal Dublin Society and were paid through its medium; inasmuch as they would then be annually brought under consideration in one point of view, and the Council of the Royal Dublin Society would have an opportunity of making any representation which the circumstances of the time might render proper in reference to them." When that paragraph in the Report was published, did it meet with the approbation of the society of which you are president at present?—Decidedly not.

809. What course did the Royal Zoological Society take in consequence of that paragraph?—The Report of the Commissioners was brought under the consideration of the Council. There was another paragraph in the Report that also came under consideration at the same time; for the Report further goes on to observe upon the benefits that would be likely to arise from an "affiliation" of other societies to the Royal Dublin Society. The Council met and considered that Report, and they decided unanimously that those passages were very objectionable; and a copy of the Report, which now lies before me, was entrusted to me to place in Sir Thomas Larcom's hands, with a view to submit it for the approbation of his Excellency, and to its being forwarded to the Treasury, as an expression of our opinion. Our first reason for dissenting from those passages was on the general principle that we never could admit that it would be for the advantage of any society which was devoted to a particular object to come under the supervision and to be subject to the criticisms of another society, which probably would not understand its details nor be interested in its proceedings, nor competent to pronounce a judgment upon it. Indeed, so strong was that impression that I think I only express the feelings of others, along with my own, in saying that if such a step were taken we should not continue to act as the Council of the Royal Zoological Society; for we should not submit to the criticisms of any other society, but particularly of a society like the Royal Dublin Society, being in its essence a great popular society, and therefore in its very constitution more likely to be led by prejudices than by calm consideration. Our opinion was, on general principles, that each society would best tend to

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the attainment of its objects by being left to take a free and independent and unfettered course; and that where a society was supported by Government grant, or entrusted by Government with the performance of particular duties, it should be responsible to that Government, and that it should not be responsible to another society; and that where it was supported by voluntary funds, it should be responsible to those who supported it, but not responsible to another society; and that being left free and unfettered we should best attain our common objects. In this Report, drawn up by our society, an instance is adduced which shows, I think, very strongly the correctness of those principles. It is upwards of 20 years since the Royal Zoological Society opened its gardens to the working classes at a nominal rate of 1 *d.* admission. The gardens were opened then, as they are now, after the hours of Divine service, to win our people away from whisky-shops and gin-shops, and from bad air. The movement excited the greatest commotion at the time. A number of members seceded from the Society, on grounds I need not state; but we persevered in the movement, and the example has been followed in England, and has been followed in Ireland in the gardens of the Botanical Society, though it took a space of 20 years to convince the managers of those public gardens that it would be an advantage to follow our example. Now, on that point our two councils would have come into collision, if the principle embodied in this Report had been acted upon, namely, that we should annually be brought under the supervision of the Royal Dublin Society, that they should report upon us, and that we should be affiliated to them; for to the principle of that movement, which I think to have been a most important one for the labouring classes, the Royal Dublin Society (rightly or wrongly) were opposed; and while we have had our gardens open on Sundays for 20 years, I believe it is only two or three years since the Royal Dublin Society opened their gardens in like manner. That is an instance in which, had we been subject to the Royal Dublin Society, or any other society, we should have been controlled in our free and independent action.

810. Sir *Edward Grogan.*] Has the Royal Dublin Society, to your knowledge, either previously or subsequently to the issuing of this Report of the Commissioners, in any way attempted to interfere with the management or superintendence of your establishment?—Never.

811. Have you any reason whatever to believe that it was the intention of the council or the members of the society to seek for any such power?—On the contrary, I have every reason to believe that the Royal Dublin Society are most anxious not to interfere with us in any way; it is not with the Society that I am dealing, but with the Report of the Commissioners of 1862, who recommended it. I believe the Royal Dublin Society are most anxious that we should be left as we are. There never was any desire on their part to put forward the recommendation, either directly or indirectly; it is only with the Report I have to deal.

812. You have stated that your council object to the word "affiliation" in the Report of the Commissioners. I find the word "affiliation," in that Report, occurs in this connection: "Real public benefit would ensue from voluntary affiliation of this kind." If the affiliation were entirely voluntary on your part, is there any real ground for apprehending that the society with whom you affiliated yourselves would usurp powers over you?—There never would be a voluntary affiliation; the case supposed could not arise.

813. Will you read the paragraph of the Commissioners' Report to which the Royal Zoological Society object?—"The annual grant to the Zoological Society is voted in the estimate of the Royal Dublin Society; but besides acting as the channel for its payment, that society does not exercise any interference with respect to it. Some advantage would be gained if all the Parliamentary grants in aid of Science and Art at Dublin were in like manner included in the estimate of the Royal Dublin Society, and were paid through its medium, inasmuch as they would then be annually brought under consideration in one point of view, and the Council of the Royal Dublin Society would have an opportunity of making any representation which the circumstances of the time might render proper in reference to them."

814. Mr. *George.*] Does that paragraph, in your view, propose to give to the Royal Dublin Society any control whatever over the Royal Zoological Society beyond handing over to them the money that Parliament might grant through their medium?—I think the last sentence of it proposes more, for it says, "The Council of the Royal Dublin Society would have an opportunity of making any representation which the circumstances of the time might render proper in reference to them," that is to our society. I object altogether to that proposal to put it in the power of any society (the Royal Dublin Society, or any other society whatever which would pay the money to us) of making any representations as to the management of our society.

815. Cannot the Royal Dublin Society do that at this moment if they like, being a society interested in science, husbandry, and the arts?—I cannot conceive it possible that the Royal Dublin Society, as at present constituted, would consider it within their sphere to make in their report any observations relative to the Royal Zoological Society; I should as well conceive it possible that the Royal Zoological Society should include in their report recommendations as to the Royal Dublin Society.

816. Sir *Edward Grogan.*] Do you conceive that the passage you refer to in the report proposes the duty upon the Society to make any representation of the kind?—It would lead them to think that it would be their duty, and that they would have an opportunity annually of making representations to the Government. It is to that passage that we object, that they should have any power to make any representations to the Government as to the management of our society. We are willing to deal with the Government, but we object to any other society interfering in our concerns.

817. They never did interfere with you?—No, and they are not desiring to do it; but the Report of the Commissioners proposes that they should do it; it is to guard against such evils that my observations are directed.

818. Mr. *Waldron.*] It is competent, is it not, for any person outside the Society to make a representation in the terms of this recommendation "which

"which the circumstances of the time might render proper?"—Certainly; any person might write any representations as to the management, but those representations would not come with the weight with which they would from a society to which the society observed upon was affiliated; it would be merely the attack of a private individual upon the management.

819. If the public outside have that power, what objection would there be to the Council of the Royal Dublin Society (which, it might be assumed, would take up such matters in a different spirit from the public outside) making such representations?—I think that there is no analogy whatever between the two cases. It is in the power of any individual, of course, to write observations with regard to the Zoological Society, the Royal Academy, the Museum of Practical Geology, or the British Museum; but I think that is a totally different thing from a society writing under the recommendation of the Treasury Commission as to whether another society is well-managed or not. I cannot see any analogy between the two.

820. If they saw any particular in which the functions of any society, the Zoological Society for instance, could be better performed, do not you think that would come within their province at present to make representations, they being a society for the encouragement of the useful arts and sciences?—I think the sphere of the Royal Dublin Society includes their own affairs, but extends no farther. I cannot acknowledge their right to come forward as public reformers, and investigate anything or everything in the city of Dublin or in Ireland.

821. You think it would not be competent for them to make those representations, supposing they were inclined to do so?—It would be meddling with other people's affairs without probably minding one's own.

822. Mr. *Dillwyn.*] What I understand you to say is, that supposing you were in the Royal Dublin Society, and this recommendation of the Commissioners were carried into effect (the Parliamentary grants to the other societies passing through your hands), and you saw anything wrong in the Zoological Society, or any other society, you would feel it your duty to represent to the Government what you considered was going on wrong, as you had some jurisdiction over the funds handed to that society through your hands?—Yes.

823. Sir *Edward Grogan.*] In point of fact, the Royal Dublin Society has no jurisdiction over those other societies?—It has no such jurisdiction, but it would have if this recommendation were carried out. I know that the Royal Dublin Society is not anxious to have the jurisdiction.

824. *Chairman.*] You look upon this paragraph as a direct recommendation on the part of the Commission that the Council of the Royal Dublin Society should have the opportunity of making representations with respect to its fellow-institutions?—I do.

825. And you consider that that power, proposed to be conferred by the Treasury Commission, would to a certain degree give an authority to the Royal Dublin Society which those other societies would not tolerate?—That is my view exactly.

826. And you consider that any interference on the part of the Royal Dublin Society with the Zoological Society would be just as improper as if you were to make a report upon the condition of the British Museum?—It would be just the same thing.

827. Sir *Edward Grogan.*] Have you any objection to the vote of 500*l.* for the Zoological Society being continued to be voted by Parliament, as at present, under the name of the Royal Dublin Society?—We have no objection; we do not care how the money comes, so that we get it.

828. *Chairman.*] You said that the Royal Dublin Society, being a popular society, was more liable to be led by prejudices than by calm consideration?—I think so; that is my view of nearly all large popular societies.

829. Do you think it advisable that scientific education should be directed by a body so complex and so fluctuating as the committees and the council of the Royal Dublin Society are?—I think such a body a very unfit body to conduct scientific or literary education.

830. Do you think the persons who should be entrusted with the superintendence of scientific education should be versed in practical and experimental science?—Yes. Properly to supervise or give instruction in science only those persons should be selected who understand the subjects, at least to some extent; and I think in any large popular society those persons would be the last, probably, to be selected for the office. I think at a large meeting of a popular society, elections very often would take place rather from the feelings than from considerations of the merits of the individuals. A large popular society is likely to be led in that way. I think, moreover, that those persons who ought to be selected, and who would be really the most competent to supervise education in those various branches, would, from their habits and dispositions, be the very last to come forward to canvass for the appointment. I do not think it likely that a large popular society would make a very proper selection of persons to conduct either scientific or literary education.

831. Do you think that persons who are avowedly and confessedly ignorant on scientific matters are persons so well qualified to make regulations with respect to the conduct of scientific education as men whose whole lives have been devoted to scientific pursuits?—I think the proposition is so self-evident that a person cannot conduct scientific education who does not understand what he is talking about, that it is scarcely necessary to spend many words on it. A man who has to superintend education must understand his subject. I conceive that a man selected to superintend scientific education, in any department connected with the profession to which I belong, who did not understand it, would be just as unfit to superintend it, or give directions with respect to it, as I should be unfit to give directions about agriculture or feeding cattle, of which subjects I know nothing.

832. You are a member of the Royal Dublin Society?—I am.

833. Are you acquainted with the composition of the committees?—I know very little about the internal management of the Royal Dublin Society, because other occupations prevent my taking any part whatever in it.

834. Under which system do you think scientific instruction could best be conducted; under such a body as the council and the committees of the Royal Dublin Society, or under the action

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action of a body of professors, with a director at their head, responsible directly to the Government?—With regard to the Royal Dublin Society (I do not mean with regard to the members of it personally) being a superintending body, I have already, I think, very nearly answered that question. I consider that its constitution as a popular body, and its councils as elected by a popular body, render it an unfit authority to regulate scientific and literary education. I know how great is the variety of details that are involved in the consideration of education, having been connected with education and its details in my own college, having been a member of the Senate of the Queen's University since its foundation, and also having been on the Council of Medical Education; and I know that those details require such a long knowledge to go through, and there are so many questions arising connected with science and its branches, that I am of opinion the body entrusted to superintend that education should not be a fleeting or a changeable body appointed by a large popular society. I therefore return to the answer I gave just now, that I cannot think the Royal Dublin Society, in its constitution or in its councils, elected as they are, is the most fitting authority to superintend scientific and literary education. With regard to the other branch of the question put to me, whether I think professors, with a director at their head, the most fitting body, I can scarcely say yes, because my opinion about it is that professors are men who should teach subordinate to regulations. I should be very glad to have the information that could be afforded by professors available to the Board or authority to superintend the scientific and literary education; but I do not think that the officers who are to discharge that duty (who should, in fact, be superintended by the Board of authority) ought to be the authority to issue orders for their own instruction.

835. *Chairman.*] My question supposed that they should be directly responsible to the Government, and that they would consequently receive their directions from the Government Board?—I consider that a very good proposal. I should not like to go so far as to say I consider it the best, but I have no hesitation in saying that it would be much better than the other.

836. Do you think that an arrangement by which the Royal Dublin Society should have the proper means and funds to carry out its exhibitional functions with complete efficiency as to library, museum, and shows, and be at the same time entirely relieved from the direction of scientific education, would work well, and would meet with the approval of the public?—I am inclined to say it would. I consider that the well-being of the Royal Dublin Society is one of the most important considerations as regards the improvement of Ireland; and I think it ought to have sufficient means to carry out those objects which legitimately come within its sphere, namely, exhibitions, encouragement of agriculture, and those practical departments which have been so much benefited by its means; its botanical gardens, its library, &c. I consider it a society that has done an immense amount of good, and no money could be better bestowed than in aiding the Society in all its legitimate objects; but I never can consider it a fit body, from its constitution, to superintend scientific instruction.

837. Therefore you think a person may be a wellwisher to the society, and at the same time recommend a change such as I have indicated?—I do not think there is anyone who can have a greater desire to see the society prosper than I have, and I should recommend the change.

838. Sir *Edward Grogan.*] Will you substantially specify the change which you recommend?—I am not prepared with details.

839. You recommend a change; what do you mean by the word "change"?—As I understood the Chairman's question, it proposed to "relieve" the Royal Dublin Society from its present supervision of scientific education; relieving it from its present function in that respect implied a change.

840. Do the members of the Royal Dublin Society themselves undertake the duty of professors, or of teaching?—Not as far as I know; I believe that the professors may be members, but I do not know.

841. Generally, as a body, do they undertake the office of teaching or professorship?—I never heard that they did.

842. The society being a popular body, you are of opinion that it could not be safely entrusted with scientific education, because the members of that society could not be supposed to be deeply versed in the department of science. If they do not themselves interfere with the educational department, would you still entertain the same objection?—I do not see how they could manage it if they did not interfere with it.

843. They do not themselves give instruction?—No.

844. How do they interfere then?—The professors are appointed by the body. That is interference to a certain extent.

845. Do you know the professors acting under the Royal Dublin Society?—I think I do.

846. Dr. Barker is one?—Yes.

847. Is he a professor of the Museum of Irish Industry also?—I do not know.

848. He gives lectures in both institutions; is that within your knowledge?—It is not.

849. Do you know that he gives lectures in the Royal Dublin Society?—I have seen his name announced as giving lectures.

850. Have you never attended those lectures?—No.

851. If I understood you rightly, you objected to the appointment of educational professors being in a fleeting body which was not itself strictly scientific?—I do not think that, in my answers to the Chairman, I used the phrase "appointment of professors," but "the supervision of scientific education."

852. You object to the supervision of scientific education being vested in a changeable or fleeting body; are you aware of the Government arrangements on that subject?—I think I added "appointed by a large popular body."

853. Is the President of the Committee of Council on Education a permanent officer, or changeable with each successive Administration?—I do not know.

854. Is it a necessary qualification for that office that he should be a scientific gentleman?—I am not acquainted with the details of the office sufficiently to be able to answer. It sometimes happens that it is necessary to have a man in Parliament for a particular purpose, and it may happen

happen that the Government look rather to his power of explaining matters in Parliament than to his having a deep knowledge of the subject; but I am not conversant with the constitution of the Council of Education, or the reasons requiring the President to be changed on a change of Administration taking place: but if he be a man whose duty it is to look after the details and the supervision of scientific education, and to take an active part in its management, I see nothing more unfit than that he should be changed with every successive Administration.

855. In order to illustrate the lectures which any professer may have to give in scientific education, do you consider that specimens are of essential utility?—That depends upon the nature of the course of lectures. There are some lectures that do not require specimens, for instance, mathematics.

856. Would you not require specimens in a lecture on botany?—Yes; but specimens would not be wanted in a lecture on arithmetic, history, or logic.

857. Can you usefully, in fact, dissociate the professor from the museum to illustrate his lectures? — It depends upon the nature of his lectures. In demonstrative courses of lectures, specimens from a museum are requisite; but I cannot say that for every course of lectures they are necessary.

858. Botany cannot be taught without specimens?—No.

859. Nor mineralogy? — Nor mineralogy, I should say, though I am a very bad mineralogist. If you come to my own profession, I do not think it would be possible to teach chemistry or *materia medica*, or botany, or zoology, without specimens.

860. In your opinion, the museum and the professor ought, in a great degree, to go together?—I think so.

861. *Chairman.*] You do not mean that wherever there are museums there must necessarily be professors attached to them?—Certainly not; there may be museums, performing very useful functions, without professors.

862. Take, for instance, the British Museum: no lecturer or professor gives lectures at the British Museum? — I understood Sir Edward Grogan's question to be, did I think it well that a professor should have a museum to refer to, as one of his appliances; and I said, "Yes."

863. Sir *Edward Grogan.*] That the connexion of museum and professor would be better adapted to explain and illustrate scientific matters to the public than if they were detached and separate? —The professor ought to have those appliances, including a museum, at his command.

864. Mr. *Lefroy.*] Am I right in understanding that your opinion is this: that whilst the constitution of the Royal Dublin Society renders it unfit for the best scientific instruction, still you think, for other objects, such as it undertakes, it is a valuable public institution to continue?—For other objects it is a most valuable society; in fact, I cannot suppose the question of any interference with the Royal Dublin Society to be a subject to be entertained for a moment; but when you put to me, "for other objects, such as it undertakes," I hardly know what those other objects are.

865. Lectures are given at times on matters connected with agriculture; and very valuable lectures, as I understand, are given on literary subjects in the evening, distinct from scientific subjects. Do you think those lectures are useful, so far as you know?—The more lectures we have the better; but not knowing the internal arrangements as to those literary lectures, I would rather not give an opinion upon them.

866. Your opinion merely went to this, that you do not think the society well suited for conducting education in scientific subjects, on account of its constitution?—Precisely.

867. Mr. *George.*] I understand you to say, that from the constitution of the Royal Dublin Society, and from its council being elective, you do not consider either the Royal Dublin Society or the council of the society a fit or competent body to direct an educational course?—That is my opinion.

868. Do I understand you rightly to apply the same observation to the Museum of Irish Industry, and to say that the professors of the Museum of Irish Industry would not be a fitting body either, even under the management of a director, to regulate their own educational course?—Precisely; but the Chairman, in his question, supposed that the professors were not to be a Board, but that they were merely to be professors to carry on their instruction, receiving their directions from a superintending authority. My position is this: that the professors who have to deliver courses of lectures ought not to be the body to supervise their own proceedings.

869. You would apply that observation to a body of professors of that kind, under the direction of a single individual?— I would; because I think they might very often be antagonistic. If there were a Board consisting of professors, and a president to supervise the management, and to give directions as to how the lectures and the instruction were to be carried out, if he differed from them, he would be in a minority on that Board. He would either differ from them, and then there would be collision, or he would accept whatever they proposed; and then I think it would be objectionable in principle that those officers entrusted to carry out the duty should be themselves the superior authority to regulate that duty. Therefore I do not think that, even with a president sitting at that Board, that such a Board ought to regulate the details.

870. To whom would you delegate a power of that description?—I have scarcely sufficiently considered that, but there is in the London University a certain number nominated by the Crown, and others, I think, elected by Convocation. That appears to be not a bad form of Board. Another mode prevails in the Senate of the Queen's University, which at present is altogether appointed by the Crown. I consider either of those modes far preferable to a Board, consisting of officers who have to do certain duties, being their own masters.

871. Do you know exactly how the professors of the Royal Dublin Society were appointed under the old constitution of the Royal Dublin Society, before the existence of the Irish Industrial Museum?—I believe they were appointed by the Society at large.

872. I presume that you are acquainted (by character, if not personally,) with the professors who were appointed by the Royal Dublin Society?—Yes.

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873. When you say you imagine that a society constituted as the Royal Dublin Society is, is likely to be led by prejudice, rather than by calm consideration, would you apply those observations to the appointments that the Royal Dublin Society did make when it had the exclusive power of appointing its professors?—I must object to answer that question; it would lead me into details with regard to the personal merits of the candidates, and the circumstances of the elections, which I would rather not go into.

874. You would not say that those appointments were so made?—I would rather not give an opinion upon the point.

875. You do not intend the observation you made about the Royal Dublin Society and its Council, being liable to be led by prejudice rather than by calm consideration, to apply to the cases I have now put to you?—I decline to answer questions that have a personal bearing.

876. Mr. *Dillwyn.*] I understood your answer to have a general application, and not a special application?—Just so.

877. Mr. *George.*] You did not refer to any particular act, but to the general tendency of the system?—Exactly.

878. Mr. *Cogan.*] Is not it quite possible that a body or society might make a very excellent appointment, and still that objection might lie to the mode by which those appointments were made?—I think that they might make very good appointments, but I think the appointments of professors are a minor consideration in the question of education.

879. Mr. *George.*] Your observation was a general one; you think the constitution of the society objectionable, and that it would be liable to be acted upon by prejudice, and without calm consideration; but you did not apply your observation to any particular instances?—Certainly not.

880. Are you aware that the same body of professors, or some of them, act in the two institutions; the Royal Dublin Society and the Museum of Irish Industry?—I have heard so.

881. I presume that the professors in the Museum of Irish Industry are appointed by the Department of Science and Art here?—I take it for granted that they are, but I do not know the fact personally.

882. Are you aware that the Department of Science and Art, by selecting as their lecturers at the Museum of Irish Industry some of the professors at all events who had been appointed by the Royal Dublin Society, showed their opinion of the fitness of those professors to discharge the duties which the Royal Dublin Society had appointed them to discharge?—I never heard questioned the fitness of the appointments; nor did I desire to convey in the remotest way that I was giving any opinion upon such a question. The question put to me was, what is the best constitution of a body for superintending scientific education.

883. Are you aware whether the professors of either of those bodies are controlled in the choice of subjects on which they lecture?—If they are not, they ought to be, because I think it quite necessary if a professor be appointed to give a course of lectures on a particular subject, it should not be left optional with him to go at random into other things.

884. I mean, supposing the Council of the Royal Dublin Society were to say to their professor of mineralogy, "we wish you to deliver a course of lectures upon mineralogy," do you suppose that the society would dictate, or do you suppose that the eminent professor would submit to be dictated to as to the details of the information he would communicate in his lecture?—Certainly not.

885. They would say to one professor, you are to lecture on mineralogy, and to another, you are to lecture on botany; but having done that, do not you suppose the society would leave them unfettered in the information they thought it right to communicate?—Now, you have touched a wider subject, that a man lecturing on botany should be left to take his own course; I differ from you there. There was a professor in one of Queen's Colleges, who had a particular subject given him, but he did not carry out the practical part of it, and it led to a good deal of disagreement as to what was to be done. I can conceive a man chosen to be a professor of botany going into the lecture-room, and lecturing on a dry system of botany; if he had not specific directions, he would say he should be left to himself. One of the uses of the Board would be to require the lecturer to supplement his lecture on the dry and uninteresting parts of botany, its elements, and so on, with demonstrations in the fields. The Board should have power to say, "you shall give class instructions twice a week in practical botany in the fields." I do not think it would be an advantageous system under which you would say to a lecturer "take a subject, and carry it out as you like." That is the use of a Board, independent of the professors, because if the professors were on the Board, they would dictate their own duties; possibly they would not like to give practical illustrations. The professor of geology might say to the professor of botany, if you will not be too exact with me, I will help you, and we will not have practical geology, or mineralogy, or botany. If the Board were so constituted the directions for the education would probably not be what they ought to be.

886. In fact, I believe the Royal Dublin Society combine the dry lecture, as you call it, within the walls of the Royal Dublin Society; and the lecture upon the growing specimens in the Botanical Gardens?—If I were on such a Board, I should not be satisfied with one, or with both; because the specimens from the gardens would be very limited in amount. The botany which a practical man wants, is the botany of the fields; he wants to acquire the ability to recognize plants as he meets them; and I do not think the dry lecture in the theatre, or the lecture with a handful of specimens from the gardens, or the greenhouse, would teach that. That bears out what I said, that there must be a Board to direct scientific education independent of the professors.

887. Are you aware, as a matter of fact, whether lectures are given in the gardens of the Royal Dublin Society by their professor of botany?—I believe that there are.

888. Do you see any practical difficulty in either the Council of the Royal Dublin Society, which would have on it some parties practically acquainted with botany, or a botany committee giving the proper directions. For instance, you have stated that you would prefer having three classes of lectures instead of two, viz. the dry lecture within the walls, the lecture in the garden,

den, and the lecture in the field. Is there anything so abstruse in that as to prevent either the council or the committee giving such directions? —The question is how that committee or council is to be elected.

889. The committee of botany elected by the society, I will assume, are parties practically acquainted with botany, and I believe, according to the structure of the council of the society, each of the committee is represented upon it. I would assume that there would be botany representatives in the council; would you not consider it probable that those parties would be very competent to give directions such as you have alluded to?—The objection applies to them, that there would be no security that men would be appointed upon the committee, who would either understand the subject, or give the proper directions for instruction in it. There would be no security that this committee would carry out, for instance, such a system as I have pointed out of lectures in the three departments of botany. The committee of 1864 might propose that system, and the committee of 1865 might abolish it.

890. Have you ever taken the trouble to look over the list of committees of the Royal Dublin Society?—I never did look over it.

891. The observation you have made as to the probability of the election of members of those committees not being desirable, is a mere general observation, and has no bearing directly upon any acts which have been done by the Royal Dublin Society?—I have never charged the society with doing anything that was wrong. I was once myself elected on a committee of the Royal Dublin Society, in a department with which they thought I had some acquaintance, but my other occupations prevented my attending.

892. One of the two modes in which you thought the controlling body, that is, the body to superintend and give directions to the professors, could most eligibly be appointed; one was the mode adopted in the London University, the senate of which is partly appointed by the Government and partly by representatives of the body itself. Do you think that an eligible mode of forming a council or body to direct and superintend the professors to be employed under them?—I am answering these questions without any preparation, but I think so, as far as I am able to form an opinion at present.

893. Are you aware that the Council of the Royal Dublin Society do not interfere in the educational arrangements that are carried on in connection with the establishment?—I am not; I know scarcely anything of the internal arrangements of the Royal Dublin Society.

894. Do you know the constitution of the body under whose superintendence and direction the courses of lectures are given now?—I do not; I must repeat what I have said, that lectures are a minor consideration in the supervision of education. I look upon the mere giving of lectures, and the appointment of professors to give them, as minor points. You can always get good professors; that is a very small part indeed of a scheme of education.

895. I understood you to say that you considered the best constitution of a body to superintend and direct the lectures to be given by the professors who are to teach the public, would be the constitution you referred to. I ask you, are you aware that it is precisely in that manner that the professors who lecture in Dublin are appointed?—My answer referred to a question asked me as to the constitution of a supervising Board. I said that I considered it objectionable that the professors should constitute that Board.

896. You recommended two modes of constituting the supervising Board. Are you aware that one of the modes approved of by you, viz., the mode adopted in the London University, is the mode at present in action in Dublin for the supervision of the scientific education of the public?—What the question refers to is merely a committee of lectures, not a committee of education. We are talking of two different things.

897. Are you aware that the Lord Chancellor is one of the members of the joint committee?—That is merely a committee of lectures. I must again repeat that the appointment of lecturers, and the settling of the subjects they are to lecture upon, is a very small point in a great scheme of education.

898. We are speaking of the supervision of the lectures given, which is carried out by means of a similar constitution to that which you approve of in the University of London?—That is only a part of it; what I meant was that if the supervision of the education were given to a body, either nominated totally by the Crown, or partly by the Crown, the lectures to be given under them would form a part of what would properly be referred to them, but I never hinted that with respect to the lectures given by the Royal Dublin Society, the constitution of that committee was objectionable. It appears to me on looking at it, that it is a very good arrangement; the plan adopted in the constitution of that committee supports my view. I say that one of the modes in which a committee, to superintend education in its widest sphere, should be appointed, is just that which is applied to the joint committee of lectures here.

899. Will you read the names of the members of that committee?—The representatives of the Government are the Lord Chancellor, the Secretary or Under Secretary for Ireland, Sir Richard Griffith, and Sir Robert Kane. The representatives of the Society are Lord Talbot de Malahide, the Lord Justice of Appeal, the Rev. J. A. Galbraith, and the Rev. H. Lloyd. I think, as far as the representatives of the Government go, it is all correct, but I cannot give the same approbation to the mode of appointment of the other representatives on that committee of lectures, to their being appointed by a large popular society. They are not appointed in the Dublin Society and in the London University in exactly the same way, because in the London University those who constitute convocation must be graduates of the University, and therefore men acquainted with education. They are men who have been educated themselves, and come to the voting free very much from popular prejudice and popular feelings, and capable of forming an opinion upon the subject; whereas the representatives of the Royal Dublin Society on this committee of lectures are elected by the hundreds who belong to the society, a number of whom know nothing about scientific education. Any one can become a member on the payment of the fee merely, for though there is a ballot,

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practically there is no difficulty in obtaining admission.

900. When you see the practical result, that Lord Talbot de Malahide, the Lord Justice of Appeal, the Vice Provost of Trinity College, and the Professor of Experimental Physics in Trinity College, constitute the nominees of the society on this committee of lectures, can you doubt that the society is quite competent to elect proper persons as their representatives?—I did not say it was not competent for them to do it; all I say is, that there is no security that they will do it. There is no security that those representatives may be on the committee next year. They may vote in the place of Lord Talbot de Malahide, the Lord Justice of Appeal, Mr. Galbraith, and Dr. Lloyd, four of the noisiest talkers in the City of Dublin, who know little or nothing of any subject.

901. If you were informed that no change has been made in the constitution of the committee since 1834, would that tend to remove your impression that there would be a danger of incompetent parties being substituted for those gentlemen?—Not the slightest. The principle remains the same.

902. Major *O'Reilly.*] Sir Edward Grogan asked you whether the members of the Royal Dublin Society, as a popular body, ever undertook to give instruction. Am I right in understanding that the distinction you wished to draw was the unsuitableness of a popular body to direct scientific education, not to give it?—I object to both. I think their attempting to give scientific information might be a mischievous proceeding.

903. In answer to Sir Edward Grogan's question, your objection was to their directing it, was not it?—I would object either to their directing it or giving it, unless I had evidence that they were fit to give it.

904. Is not the direction of scientific education an important function; I mean determining the number and nature of chairs, and directing the programme and mode of teaching?—I have had some experience upon it, and I think that it is about one of the most difficult things we have to deal with, requiring long knowledge and cultivation upon the subject.

905. You do not consider what was stated to be the course pursued to be the best mode, namely, to leave the professors to deliver what lectures they think fit?—No. I think it is as absurd for a large popular society to undertake the supervision of scientific education as it would be for them to undertake the direction of a course of law.

906. It is the directing of the mode of giving it, and the mode of carrying it out, that you think they are incompetent to do?—Yes.

907. With regard to the question of museums and collections, do you think it would be objectionable that the teaching body, having the ordinary appliances for illustrating its lectures in the way of specimens and other things, should be not directly connected with the great museums and collections: it is not necessary that the lectures should be connected directly with large museums?—Not at all necessary. There is the museum necessary for popular instruction or reference, and there is the museum necessary for illustration of a course of lectures. The same observation would apply to libraries. In each department of lecturing there should be a library for that department, and there is required, moreover, a library like the British Museum Library, for everybody. The large museum is the museum for reference, while the museum for the professor's purposes need only be a museum containing the specimens he wants for illustrating his lecture. The best museums for teaching may often be very small museums.

908. The Museum and collections of the Royal Dublin Society would be just as available for teaching purposes, if the professors were not connected directly with that society?—Quite; just as the Library of the British Museum, or the collection of zoology in the British Museum, is available for instruction, and for reference in relation to lectures delivered elsewhere.

909. Mr. *George.*] Do the Committee rightly understand you to say, that you think it no advantage to a lecturer to have a large collection of specimens to illustrate his lectures?—No, I do not say that. (*The Witness handed in the Report of the Royal Zoological Society upon the Report of the Treasury Commission.*) (*Vide* Appendix.)

Mr. Robert Henry Scott, called in; and Examined.

Mr. *R. H. Scott.*

910. Sir *Edward Grogan.*] You are a lecturer in the Royal Dublin Society?—I am acting as *locum tenens* for the professor of mineralogy, Dr. Scouler.

911. Since when have you held your present appointment?—Since the 1st of April 1862.

912. Will you briefly describe to the Committee the nature of the duties that are entrusted to you?—My sole duties, as acting for Professor Scouler, are to deliver a course of 12 lectures, which are free; and I am further permitted to give private demonstrations in the museum, for which fees are charged. Those are the sole duties I perform, in consequence of the remuneration for the duties being so small.

913. If Dr. Scouler were able to perform the functions which you now discharge, would the same duties be imposed upon him?—I presume that if Dr. Scouler were able to perform the functions of the office, he would devote his time to the whole duties of his professorship, whatever they may be. When he was acting for the society, he had for a considerable length of time the care of the museum, besides lecturing on mineralogy. In the year 1854, he, from ill health, was allowed to retire. In 1862 the society, finding that the science of mineralogy was neglected to a very great extent, considered it advisable that Dr. Scouler who was able to perform duties in Scotland, should be called upon, either to return to his duties in Dublin, or to allow the society to elect a substitute. He elected to remain in Scotland, and let the society elect a substitute; and the society allocated a certain proportion of Dr. Scouler's salary to pay the substitute.

914. Your duties are to give 12 public lectures in the year?—Yes; and to give such private instruction as the pupils may desire.

915. Do

915. Do any considerable number of pupils avail themselves of that private instruction?—In the first year, when the thing was new, there were 15. In the second year there were 20. This year, the third year, which has just commenced, I expect more.

916. What is the fee which they pay?—Up to this year it was a guinea for 12 demonstrations; this year, which has commenced in April, the council have permitted me to extend the course to 18 demonstrations, and to increase the fee to a guinea and a-half.

917. Notwithstanding the increased fee the numbers are increasing?—I expect the number will be greater.

918. Under the system of the payment of a guinea for extra education, you found your number increasing?—I found the number increasing.

919. Are the gentlemen who attend that special course those who have attended your general course?—They are to a great extent.

920. Do you imagine that that popular course in any way tended to lead the minds of the pupils who afterwards joined your special course to that particular study?—Certainly; most of the students come to ask me special questions relating to the popular course. Properly speaking the subjects treated of in the popular course are not very popular; I treat of the subject of mineralogy and the subject of smelting, which cannot be called very popular, but they are public lectures. I treat mineralogy as perfectly as I can, in a course of 12 lectures.

921. Those gentlemen who desire further information can have special instruction on payment of the fees?—Yes; they came to the public lectures, and then find it worth while to go round the museum and examine the specimens with me.

922. How long has the establishment of the professor of mineralogy existed?—It was instituted in the year 1795 or 1796, or about that time when the Leskean Collection was acquired, Mr. Higgins was then appointed to teach mineralogy and to make experiments in dyeing, and other chemical subjects. In 1809 the development of chemistry was so great, that Mr. Higgins was allowed to devote his entire attention to chemistry; and Professor Jameson, of Edinburgh, was appointed professor of mineralogy. He held that office for one year, during which time he performed no duties whatever. He was dismissed, and Sir Charles Giesécke was appointed professor. He held that appointment, and also undertook the care of the general museum until his death in the year 1833. On his death, Dr. Scouler was appointed professor of mineralogy, performing also the extra duty of curatorship of the museum; and then, I think in the year 1851, the present curator of the museum was appointed; Dr. Scouler being still continued professor of mineralogy. In 1854 he was allowed to retire, and, in consequence of his age, it was decided that he was not to be called upon for further duties. I believe those were the words of Dr. Playfair's report, but eight years afterwards, finding that he was able to discharge his duties in Scotland, he was called upon to return to his duties in the Royal Dublin Society.

923. He preferred to remain in Scotland, and you were appointed to act in his place?—Yes.

924. Major *O'Reilly.*] Do you know what duties he performed in Scotland?—Arranging some of the collection in the Andersonian University; it was a private appointment.

925. Sir *Edward Grogan.*] Are the duties entrusted to you simply connected with mineralogy, or do they embrace any other branch?—They were defined to be connected with mineralogy. I obtained the leave of the committee of natural history to extend them to smelting, and to the practical uses that may be made of minerals; for example, when I have finished speaking of silicic acid, I speak of the manufactures of glass and earthenware, as directly connected with mineralogy.

926. Is there any school of mining engineering under you?—No, nothing whatever now; formerly there was a professor of mining; Sir Richard Griffith was professor of mining between the years 1812 and 1824, and lectured on mining. There never was a school of mining engineering that I am aware of; nothing like the Jermyn-street institution.

927. The duties you perform at present are those of the professorship of mineralogy, embracing the economic applications of mineralogy in the way of smelting, and their application to practical purposes?—Yes.

928. Was there any sharp competition when you were elected to fulfil those duties?—I believe there was one other candidate, but there are not many gentlemen who would choose, for 50*l.* a-year, to devote themselves to the teaching of mineralogy. I had devoted my entire attention for several years to chemistry and mineralogy, and I was giving private instruction in Dublin at the time.

929. I presume that there was an inquiry into the qualification of the candidates for the office?—I believe Dr. Steele will be better able to speak to that than I am, but I believe the Council of the Royal Dublin Society appointed a committee of three persons; namely, Sir Richard Griffith, Mr. Senior, and Professor Haughton, to recommend a fit person to perform the duties, and I was appointed on their recommendation.

930. Was that conclusion based on the qualifications of the candidate?—I cannot say at all; the gentlemen in question knew me.

931. Is the number of students who attend your popular lectures considerable; does it fill the theatre?—Not nearly fill the theatre. The average number that attended the last course was about 90. At none of the public lectures can you say that all the people who attend are students; especially when the course is not compulsory for the certificates of merit given on the Government examinations connected with the Museum of Irish Industry, but there would be 20 or 30 students out of that number who attended regularly through the whole course.

932. Out of the 90 or so attending the popular course, I understand you that 20 or 30 entered upon the special course, and were satisfied to pay specially for that course?—Yes.

933. Will those 20 or 30 gentlemen be required to stand an examination after their course, or is it entirely voluntary?—It is entirely voluntary. The special demonstrations are attended by a good many students of Trinity College, because the collection of the Royal Dublin Society is so much better than that in Trinity College, that they think it worth while, after they have received the instruction they get there, to avail themselves of the opportunity of studying

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studying the specimens in the museum of the Royal Dublin Society. They cannot handle them and look at them at Trinity College, except through glass. They cannot go round the collection with the professor, handling the specimens, and therefore they come to a place where they can have that opportunity.

934. The students of Trinity College who attend your lectures do so as a supplemental course to that which they have already received at Trinity College?—Yes, some of them come to the public lectures. At the lecture on iron smelting, the whole senior class of the engineering school come up; at least they did the last time, and probably they will again, because no special lecture on iron smelting is delivered in Trinity College. It is optional with them to come. If they find that a person is lecturing on a subject connected with their profession, they find it worth their while to pay money for it.

935. I infer from you, that the education which they get in science in Trinity College is deficient, and requires to be supplemented by having recourse to yours?—As far as I am aware, in none of the universities in England are there lectures specially on smelting. The only lectures on smelting that are given in England are those by Dr. Percy, at Jermyn-street.

936. Do they attend other lectures of yours besides those on smelting?—Some of them come to some of the lectures; they do not attend the whole course; they come to the lectures which they consider worth hearing, and the lectures on smelting form a part of the course. At certain lectures in the course, as, for instance, the one on iron smelting I know I shall have a full attendance.

937. Mr. *Lefroy.*] I understand you to say, that students in the Dublin University, having completed their course at the university, afterwards come to your lectures, because they have an opportunity of examining better specimens, and have more facility for examining them than they have in the Dublin University?—Yes, while they are going on with their course.

938. The advantage is that they have a better museum in the Royal Dublin Society than they have in the Trinity College?—A better mineralogical collection.

939. Sir *Edward Grogan.*] There is a better mineralogical collection in the Royal Dublin Society, which they can make use of, affording illustrations of your lectures?—Yes.

940. In fact, the appliances of your lectures are, in that respect, more perfect than they are in Trinity College, where they have not so extensive a museum?—Yes; the idea of going round the collection in Trinity College, I believe, has never been carried out. The professor has never been asked to do so.

941. You explain to the gentlemen by handling the specimens of the minerals you have treated of in your lectures?—Yes; and they have an opportunity of asking any questions they like.

942. Do you consider that the arrangements existing at present in the Royal Dublin Society, for the purpose of education in this branch, are perfect, or is there anything required to complete them?—There are no means for carrying on chemical examination. When I came to the Royal Dublin Society, I found almost absolutely no appliances for instruction in mineralogy, except the collection of specimens. During the two years I have been at the Society, the Council have furnished me with funds to provide diagrams, but there is no laboratory and no means of examining the specimens that come in by chemical tests.

943. You are unable to examine the specimens that come in without the assistance of a laboratory?—I can only judge of them by my own knowledge of them, and by blowpipe examination; but that is not satisfactory.

944. You think the establishment of a laboratory for those purposes indispensable?—Yes; it has been admitted by the Council of the Royal Dublin Society on my recommendation. They have stated that, if ever they had funds, they would be willing to provide me with all the appliances I think necessary.

945. You are, of course, perfectly conversant with the mineral collection belonging to the Royal Dublin Society?—I am.

946. Will you give the Committee your opinion of its value and utility for educational purposes?—It was a perfect collection, up to the date of Sir Charles Giesécke's death, 30 years ago; since that time very few additions have been made to it, except a large donation of minerals from the late Baron Joy. Previously to that addition the museum consisted of two collections, the one the Leskean, which was bought in 1795, for 1,300 *l.*, by the Irish Parliament; and the other, the minerals forming the general collection, which were added by Sir Charles Giesécke. These catalogues (*producing them*) show that it is a large collection.

947. You stated that, up to a particular period, the mineral collection was very perfect; do you mean to infer that it wants some additions at present?—No money has been spent in buying new minerals since, or very little. The amount of money spent in purchases during the last 10 years for the whole Museum of the Royal Dublin Society is not much more than 300 *l.*

948. I need hardly ask you whether that arises from the want of funds, or from disinclination on the part of the council to give you every necessary appliance?—From the want of funds.

949. In what state is the fossil collection belonging to the society?—It is not extensive, parts of it are perfect, but it is not at all a complete collection, because there have been no fossils purchased of late; all the fossils which have been collected from the geological survey have been kept in the museum of the geological survey, and duplicates of specimens of fossils collected by the geological survey of Ireland have not been allowed to be given to the Royal Dublin Society; they are sent to the Queen's Colleges

950. Are you able to say whether application has been made by the council that some of the duplicate specimens collected by the geological survey, should be deposited in the Royal Dublin Society Museum?—I am not able to state whether any such application has been made or not.

951. Are there duplicate specimens which might have been handed over to the society?—There are immense quantities; I do not know the exact number, but I should think probably Professor Jukes would be able to say how many thousands.

952. They

952. They are sent to other institutions, but not to the Royal Dublin Society?—They are sent to the Queen's Colleges; I do not mean to say the whole are, but some are.

953. Mr. *Lefroy.*] Do you know why they are not sent to the Royal Dublin Society?—Merely giving my own opinion, I should not think that the director of the geological survey in England, would think it worth while that there should be two sets in two different museums in Dublin.

954. Why are they sent to one institution and not to the other; is it because it is supposed that they would be better protected in the one case than in the other?—I suppose it is because it is considered that the other could not get them in any other way.

955. Sir *Edward Grogan.*] Is not the geological construction of the earth one of the most important parts of a scientific institution?—It is a most important subject, and is very carefully attended to in the scientific education of almost all countries.

956. For its economical and scientific value?—Yes.

957. Do you find a growing desire for that knowledge among the young men of Ireland?—I can hardly say that, because I have only been two years in the office I fill. The increase in the number attending the private lectures shows something of that kind, because that subject is treated in the private lectures.

958. As far as your experience has gone, are you in a position to say that increasing interest is felt in that subject?—Certainly.

959. Have you any knowledge of the provincial lectures which have been established by the Royal Dublin Society?—I am a lecturer myself; I have delivered three courses of lectures, at three different periods.

960. Were those lectures well attended?—Those were well attended, certainly; the average number of attendants at the course, at which I had the largest attendance, was about 120, and that was as many as the room would hold; sometimes the room was over full.

961. You think that the accommodation where the lecture was given was, in some degree, the limit of the attendance?—Certainly, in Dungannon.

962. If the room had been larger the attendance would have been larger?—Yes; no doubt it would.

963. Are you limited, permitted, or required in those lectures to give special instruction to students who attended the general course?—I am required to give a certain number of private lectures explanatory of the public lectures.

964. Would a fair proportion of the number of attendants at the public lectures attend the private lectures?—People who attend the general lectures are a great many of them young ladies, and people who have not much to do; but there was usually a class of 15 or 20 who attended those special lectures. Perhaps 15 would go for examination at the end; it was optional with them to go in for examination; there were premiums given at the end of the course.

965. Was there any payment required for those special lectures?—Nothing whatever. As to the management of the private lectures, in addition to the public lectures, that is entirely in the hands of the provincial committee who invite the lecturers. I have nothing, as a lecturer, to do with receiving any payment except from the central committee in Dublin.

966. Attendance on that special class which you have referred to is entirely discretionary on the part of the students?—Yes.

967. Did the attendance, such as it was, lead you to think that a desire for knowledge on the subjects on which you lectured was spreading among the junior classes in Ireland?—Certainly; it struck me that there was increased attention to scientific instruction in the different places to which I have gone.

968. Would it be your opinion that the popular course of lectures, that is to say, the preliminary ones which you give in those provincial towns, was therefore instrumental in awakening a desire for scientific knowledge in those localities?—Yes; it is in that way that those lectures are advantageous; they induce persons in those different localities to devote their special attention to science, and to carry their studies further.

969. Practically speaking, you consider that branch of the society's operations very useful?—That branch of the operations of the Royal Dublin Society, certainly, is very useful indeed. I was not appointed as a lecturer in consequence of being connected with the Royal Dublin Society; I held that appointment long before I was connected with the Royal Dublin Society.

970. You were appointed lecturer in the provincial towns by the committee of lectures?—Yes.

971. And you found those local lectures very useful in eliciting a feeling or desire on the part of the people for further scientific information?—Yes.

972. Are you at all aware of the rules and regulations with respect to the admission to foreign libraries, or with respect to the facilities given for reading in the libraries or borrowing books from them?—Yes. I have lived a good deal abroad, and I know that in some libraries books may be taken out by persons who are reading in the library, on the production of a certificate signed by certain persons; for instance, I have myself taken books out from the library in Berlin on the presentation of a ticket signed by one of the professors at the university, and there was no sort of difficulty in the way of my taking books out for a certain short period.

973. What was that period?—A fortnight or three weeks.

974. Much about the same period as is allowed by the Royal Dublin Society?—Much about the same; but the facilities were much greater in the Berlin Library than the Royal Dublin Society. In the Royal Dublin Society no one but a member can take the books out, whereas in Berlin, I, as an Englishman resident in the town, took out a book on a certificate signed by a person who had the right to grant that certificate.

975. A certificate that you were a proper party to be entrusted with such privilege?—Yes.

976. Is there any limit as to the number of books that may be so taken out?—I cannot say; I got whatever book I wanted.

977. Did you ever hear any objection raised, by anyone in the habit of frequenting the library, as to inconvenience caused by the absence of those books from the library?—I heard of one complaint, on the part of a person who had been an official dismissed from the British Museum

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Library here; that was the only complaint I heard of: he complained that the regulations in Berlin were different from those in the British Museum. The advantages to scientific men from taking books home to read more than counterbalance, in my opinion, the disadvantages that others might experience from the absence of the books.

978. *Chairman.*] Were those books lent exclusively to scientific persons?—No.

979. Do not you draw a distinction between a system open to all and a system which gives privileges only to a few?—I would only say that I think it would be advantageous, if it could be regulated properly, that every person should have an opportunity of getting books from the Royal Dublin Society, on a certificate signed by a member.

980. Sir *Edward Grogan.*] You have stated that the privilege you speak of as existing in Berlin was not exclusively confined to scientific gentlemen?—No; it was open to all.

981. Anyone supposed to be a proper person to be allowed to use the library might, on a certificate of respectability, borrow those books?—That is my opinion; that was my own case.

982. Do you know what the regulations are with respect to any other foreign library?—In Munich no books may be taken out; you must read them in the library.

983. *Chairman.*] Is the library of Berlin a very large library?—Yes.

984. Are there many copies of the same work?—Not that I know.

985. Are you aware whether there is any law of copyright requiring the presentation of books?—I do not know.

986. Mr. *Lefroy.*] Is there a general demand for those books to read at home?—A very general demand. The library may be compared with that in the British Museum; I am not sure whether it is not larger.

987. Mr. *Dillwyn.*] It is a great lending library, in fact, is it?—Not very many persons take out the books. I do not know to what extent the privilege is availed of.

988. Mr. *Lefroy.*] I understood you to say that there was a general demand for those books to read at home?—A considerable number of books are borrowed from the library, but still the library cannot be called a lending library, because the proportion of those who read in the library is much greater than the proportion who take out books.

989. *Chairman.*] Have you ever had occasion to use the British Museum Library?—No.

990. Mr. *Dillwyn.*] Are the minerals in the Museum of the Royal Dublin Society well exhibited?—No.

991. You want more room?—We want more cases rather than more room.

992. If you had duplicate specimens sent you from the geological survey, you have not the means of exhibiting them?—There are no funds to purchase even a single case; we have to use the cases which have been used for the exhibition of manures before.

993. If you had the geological specimens sent to you, you have no place in which to exhibit them?—We have plenty of room; we have a large room which is entirely empty; we could exhibit them if we had cases for them.

994. *Chairman.*] Have you any power of exchanging specimens?—Yes.

995. Who exercises the power; is it the committee?—The committee of natural history, on the recommendation of the professor of mineralogy or the director of the museum. I report, through the director of the museum, that it is advisable to exchange.

996. Sir *Edward Grogan.*] There has been a new museum built lately; is that the museum you refer to in which the absence of cases is so remarkable?—Yes.

997. Have you, as professor, felt practically an inconvenience from want of arrangement of the specimens in proper cases?—Very serious inconvenience.

998. Has it operated to the detriment of your students?—Yes. I cannot adopt anything like a scientific classification, or complete the arrangement of the minerals in consequence of the want of cases.

999. Has part of them been properly classified?—Yes; one-half, I may say.

1000. Was that as far as your cases went?—Yes.

1001. And the remainder were obliged to be stowed away in boxes?—A proportion of them is exhibited; but they are mainly laid aside in drawers and boxes.

1002. That is one of the striking wants of the Society at present?—Certainly.

1003. Mr. *Lefroy.*] Are many of the valuable specimens you have becoming injured from want of cases?—I cannot say that of the minerals; it is the case as regards the natural history collection.

1004. Sir *Edward Grogan.*] Is this a syllabus of the course of lectures you are at present delivering (*handing the same to the Witness*)?—Yes. I commenced it this day week in Dublin; the lectures will be resumed when I return.

The Rev. Humphrey Lloyd, D.D., F.R.S., called in; and Examined.

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1005. *Chairman.*] You are Vice-Provost of Trinity College?—I am.

1006. You have taken a very great interest, I believe, in the establishment of lectures in connexion with the Royal Dublin Society?—Yes; I am a member of the committee of lectures.

1007. The joint committee of lectures of the Royal Dublin Society and the Museum of Irish Industry?—Yes.

1008. That committee of lectures was established in 1854, in consequence of the report of Dr. Playfair?—It was.

1009. In which Dr. Playfair commented upon the anomaly of paying two sets of professors to deliver the same class of lectures in two different establishments?—I believe so; but I do not remember the exact tenor of Dr. Playfair's report

1010. The committee of lectures have turned their attention, have they not, also to the establishment of local schools?—They have, at a more recent period. At the suggestion of the Department of Science and Art, they resolved, in 1859, that a sum not exceeding one-half of the funds that were available to the purpose of lectures,

tures, should be applied to the establishment of local schools for scientific instruction.

1011. You had considerable difficulty, had you not, in connexion with the establishment of local schools, in consequence of the difficulty of obtaining resident local teachers?—Yes; a difficulty which, I apprehend, has been experienced in England also. I find in the Report of the Treasury Commissioners a very strong statement upon that subject, to the effect that some of the English towns were unable, even in combination, to furnish sufficient remuneration to support a teacher.

1012. The aid given by the Science and Art Department for scientific instruction is given, I think, in three forms, viz.: 1st. Payments by the results to certificated teachers; 2d. Examinations, with prizes and medals, open to all persons of all classes who present themselves; and 3d. Aid to the extent of 50 per cent. in the purchase of apparatus, &c.?—Yes; teachers under the Science Minute are paid according to the success of their pupils.

1013-14. And they are paid in the proportions of 1*l.*, 2*l.*, 3*l.*, 4*l.*, and 5*l.*, according as the pupils, on passing their examination, obtain an honorary certificate, or a first, second, or third Queen's prize?—Just so; on the condition, however, that they shall have received 40 lessons from the teachers.

1015. The science schools are set on foot, are they not, on the application of institutions and local committees to the committee of lectures?—Yes.

1016. Then those local committees or institutions have to bear a portion of the preliminary expense of starting those schools, have they not?—I believe so, but am not aware to what exact extent they have borne part of the expenses.

1017. Have they not to go to the preliminary expense of providing schoolrooms?—Yes.

1018. In fact, whatever expense is necessary for keeping the school open during a certain period?—I think so, but am not quite certain.

1019. Sir *Edward Grogan.*] Your attention has not been directed specially to those points?—My attention has been directed chiefly to the part which the committee of lectures have had in the arrangement.

1020. *Chairman.*] Are you of opinion that there must be considerable difficulty in keeping those schools going in Ireland upon mere payment by results?—I think there is considerable difficulty. The difficulty is experienced in England also; but it is enhanced in Ireland, for this reason, that, by one of the regulations of the Department of Science and Art, the remuneration to the teachers is dependent upon the circumstance that the pupils are of the operative class; and in that class, unfortunately, we have not so great a number of persons seeking instruction as in England.

1021. Persons who would not come under the head of the industrial classes would pay a certain fee to the teacher, would they not?—They would; I spoke of the remuneration derived from the Department of Science and Art, which is made to the teacher in proportion to the number of successful pupils he had brought up for examination. The regulation of the Department limits that to pupils of the artizan class.

1022. The Department allows some latitude with regard to defining what may be called the artizan and the industrial class?—It does, to a certain extent; it defines the artizan class to be persons in the receipt of weekly wages, but it allows a somewhat larger construction occasionally under special circumstances.

1023. With regard to the system of lectures, do you consider that the system, as transferred to the committee of lectures, of the provincial lectures and lectures in Dublin, places you in any way in opposition to the science and art system of instruction by means of science schools?—I do not.

1024. Do you consider that the lecture system, on the whole, has a tendency to encourage a taste for those schools?—I do, decidedly.

1025. To create an interest in them where none exists, and to bring persons to a contemplation of studies to which they otherwise would probably not be attracted?—Certainly.

1026. Do you consider that if Professor Huxley or Professor Owen or Professor Faraday gave a series of lectures in any provincial town in Ireland, it would in any way interfere with the establishment of science schools?—Certainly not; it would probably aid such establishment.

1027. On the other hand, do you think that it would be the means of bringing a large number of people to study in those schools, by the attractions which such eminent persons as those would hold forth to the people, who listened to them?—I do; I think that they would receive thereby a great stimulus to seek further instruction. Perhaps, on that point, I may be allowed to quote the statement of the committee of lectures itself, in the report for 1861, which will have more weight than anything I could say: "In conclusion, the committee think it right to say that the results of this year have confirmed them in the views put forward at length in their last year's report, that the system of provincial lectures and examinations which they have been carrying on for the last few years is not opposed to that of class instruction by certificated teachers, but, on the contrary, affords the best means of gradually introducing it. In every instance in which the committee have succeeded in starting such classes, their success has been directly and immediately owing to the opening made, the relations established, and the taste for scientific knowledge disseminated by their previous operations." That is the statement of the committee after a year's experience of the combined system of instruction, partly by provincial lectures and partly by class teaching.

1028. Has this combination of the two methods, the one a system of lectures and the other a system of school instruction, been recommended by that learned body, the Council of the Royal Society of London, and has it been concurred in by the Council of the British Association for the Advancement of Science, in the year 1857?—It has, in very strong terms.

1029. The precise system that has been adopted by the committee of lectures?—The same system. The recommendation of the Royal Society relating to this subject has been quoted in the report of the committee of lectures of 1860; it is as follows: "The President and Council (of the Royal Society) recommend that the establishment of classes in metropolitan and provincial schools, where those who have not the means or opportunity of studying at the universities, may be taught the elements of physical science, on a systematic

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systematic plan, be promoted by grants from Government, in aid of such funds as may be locally contributed for that purpose. That the formation of provincial museums and libraries be encouraged in like manner, and that provincial lectures, accompanied by examinations, be established in Great Britain, in towns which request this assistance and engage to provide a part of the expense; such lectures to be in aid of the schools above mentioned. So that, by means of the two combined, a sound knowledge of the principles and applications of science may be systematically taught." I may mention, that this is part of an extended report made by the Council of the Royal Society, and concurred in by the Council of the British Association for the Advancement of Science, on the question, whether any steps could be taken by Government or Parliament to promote the interests of science in this country; this is one of the leading recommendations of that report. It is remarkable, as bearing upon the operations of our committee of lectures, because it recommends the precise plan that has been adopted in Ireland.

1030. If you were asked the question, what you considered was most conducive to satisfactory instruction in science, lectures or class instruction, I presume the answer you would give me would be the combined system?—Certainly.

1031. I believe one of the objections to the lecture system that has been made is, that it has not been reproductive; that is to say, that it has not produced teachers?—That has been stated by the Department of Science and Art.

1032. Would you consider that that arose from any inherent defect in the system itself, or from scanty funds at the joint disposal?—I think that it does not arise from any defect in the system itself; but from the difficulty of procuring adequate remuneration to the teachers. The latter difficulty has been experienced even in the system of the Department of Science and Art which is limited to school teaching. The object of the Department of Science and Art seems to be to render their system as far as possible a voluntary system. I do not think that end is one to be desired or aimed at by the State. The principles of free-trade, however applicable to our material interests, are not applicable to education, and, in point of fact, they have never been so applied. The universities are largely endowed for the education of the higher classes; Parliament grants large sums of money for the education of the lower classes; and there is no reason why the middle classes and the artizan classes should be dealt with differently.

1033. I believe that considerable popularity has attached to your scientific lectures from the fact that, as far as possible, they are adapted to the locality in which they are given?—Yes.

1034. In the lectures and the examinations that take place, regard is had to the geological or mineralogical character of the district?—That is so.

1035. Do you believe that the lecture system, as a general rule, is appreciated throughout Ireland in the different localities in which the lectures have been given?—I think it is. In the year 1860 a letter was addressed by the secretary of the committee of lectures, Dr. Sidney, to the local committees at those towns where lectures had been delivered, simply asking the question, how far that system commended itself to their approval; and he received several answers, which are embodied in the report of the committee of lectures to the Department for the year 1860. These answers illustrate, in a very striking manner, the value of the system; I may refer to one or two. Sir John Young, formerly Chief Secretary for Ireland, who was president of the Bailieborough Literary Society, writes, in reply to Dr. Sidney's circular, as follows: "I should hear with much concern the account of any curtailment of the fund appropriated for the provincial lectures. That they have been of use, real use, in forming a taste for practical science, and in directing the minds of many young persons to the valuable subjects they treat of, I have not the slightest doubt." He goes on to say: "I may safely affirm that the discontinuance of these lectures would deprive a rising and intelligent class of people of sound elementary instruction in various branches, to which it is most desirable, in every point of view, they should have access, but to which their chance of access is small indeed, except through the door opened to them by your Committee."

1036. Have you similar replies from most of the local institutions in Ireland?—They are generally similar, although, in one or two cases, some dissatisfaction is expressed as to some of the details; but, generally, there is a very decided expression of approbation of the system. I may refer, in particular, to the opinion expressed by Dr. Robinson, of Armagh, who, as president of the Armagh Natural History and Philosophical Society, writes in somewhat similar terms to those already quoted.

1037. Sir *Edward Grogan.*] Will you read Dr. Robinson's letter?—"The Committee of the Armagh Natural History and Philosophical Society feel pleasure in bearing their testimony to the great advantages arising from the system of provincial lectures and examinations, as carried on by the committee of lectures, Dublin Castle. Having already been favoured with grants of four courses of lectures, the Committee of the Armagh Natural History and Philosophical Society are, from their own experience, enabled to state that, as a means of directing young men in the pursuit of science, they consider the system admirably adapted, and that it has proved of great value and importance in connexion with their own institution; but, as far as the 'artizan and working classes' are concerned, there being few of them in this city and neighbourhood, the advantages which the system holds out could not be fully realised. The committee, on the last occasion of lectures being delivered in Armagh, had an opportunity, for the first time, of forming their opinion as to the results of the plan of examinations; and they have great pleasure in stating, that they believe the plan eminently calculated to encourage a spirit of inquiry and promote a taste for scientific pursuits. They believe also, from their experience during the last 10 years, that the lectures hitherto delivered before their society have been extremely useful, but especially so in the last instance, in which only were the lectures followed by examinations; and they feel convinced that such lectures will become more and more useful as scientific knowledge progresses."

1038. *Chairman.*] You consider those reports ta be extremely valuable testimonies as regards the efficiency of the system?—We do. They are from

from persons who have been interested in the lectures, and from places at which the system has been tried; and the concurrent expression of opinion, in all or most cases favourable, has been very satisfactory to the committee.

1039. The report which the committee of lectures sent in to the Lords of the Committee of Privy Council was naturally very much influenced and directed by those communications so sent to you?—It was.

1040. In the report of the Department of Science and Art, in 1861, in which is embodied the report of the committee of lectures, I do not find that there is one word of reference to those communications that had been received by you and that are entered in your report; will you see whether there is any reference to it (*handing the Report to the Witness*)?—I see the passage from Sir John Young's letter quoted.

1041. Is the report, as sent in by the committee of lectures, printed there *in extenso*?—It it is not; but on that subject I should rather that Dr. Sidney were examined, as he is more fully acquainted with the facts.

1042. I believe the Science and Art Department are not favourable to the system of lectures?—They are not.

1043. A number of most interesting communications, and not only most interesting communications, but very important, as proving the appreciation of the lecture system, have been suppressed in this printed report of the Science and Art Department?—The appendix of our report, containing these letters, has not been printed by the Department. I am not aware of all the circumstances connected with this omission; but I believe Dr. Sidney can fully explain the circumstances. The fact is, as you state, the report has not been printed *in extenso*.

1044. Dr. Sidney is at the present moment inspector of your science schools?—He is.

1045. Can you inform the Committee of the manner in which Dr. Sidney is paid?—He is paid out of the 500 *l.*

1046. He is paid out of the 500 *l.* allocated by the Government to the committee of lectures?—His small salary is paid from the grant to which you refer, and his travelling expenses were defrayed from the second grant of 400 *l.* subsequently received. There were two grants made to the committee of lectures: first, the grant of 500 *l.*, which was formerly under the management of the Royal Dublin Society, and which was transferred to the committee of lectures in 1854; and the further grant of 400 *l.* made, in order to enable the committee to carry out the examination system in connection with the lectures.

1047. That is to say, the Department of Science and Art paid the 400 *l.*?—Yes, in 1857. In a few years afterwards the school system of this Department was organised, and it seems to have been conceived by them that the Irish system was in some measure antagonistic to it, and they discontinued the 400 *l.* which was granted for the purpose of examinations in connection with the lectures.

1048. I think Dr. Sidney was the person who organised the science school system, or who very much set it on foot?—Yes, in Ireland, and I cannot speak too strongly of the value of his services to the committee, or of the zeal and ability with which he conducted its operations.

1049. I presume it is your opinion that, as he was the gentleman who first set going the science schools, he is perfectly competent to carry out that system?—Perfectly competent.

1050. His services were so much appreciated by the committee of lectures, that it was intended at the time when you were in possession of 900 *l.*, to make his salary 250 *l.*?—It was.

1051. Has Dr. Sidney the sole inspection of the science schools?—He has the sole inspection of the science schools so far as regards the committee.

1052. Was not an English inspector, under the Department of Science and Art, sent over?—Yes.

1053. Is he a paid officer of the Department?—Yes.

1054. Dr. Sidney is a paid officer of your Department?—Yes.

1055. So that two gentlemen are paid to do the same thing?—Yes. The officer sent by the Department was sent subsequently to Dr. Sidney's inspection.

1056. Do you recollect whether there was any communication from the Department of Science and Art to the effect that they did not require any Irish supervision of those Irish Schools of Science?—I do not remember such a communication, but I think that has been the general tendency of the order made by the Department, to centralise.

1057. Immediately, upon the proposal being made to pay Dr. Sidney 250 *l.* out of the 900 *l.*, the 400 *l.* was withdrawn, was it not?—It was.

1058. But I think that the Department of Science and Art very generously offered to the committee of lectures to permit them to pay Dr. Sidney 250 *l.* salary out of the 500 *l.* which was allowed to them?—They did so; but the committee declined to do it, and Dr. Sydney himself fully concurred in the propriety of so declining.

1059. In fact, they offered to allow you to expend one-half of the whole sum which was for the total administration of the lectures, in paying one gentleman for administering those lectures?—Yes.

1060. The committee of lectures treated this offer on the part of the Department of Science and Art as a very absurd and a very insidious suggestion, did they not?—They thought it a very unreasonable one; and Dr. Sidney himself, in the strongest way, disapproved of it.

1061. How far do you think the Department of Science and Art had any power whatever to make this proposal to you to pay your officer out of that 500 *l.*?—I do not think that the Department had, properly speaking, any control over the application of that grant. It was originally granted to the Royal Dublin Society, and for a special object.

1062. Before the Department of Science and Art was in existence?—Yes; in 1854 it was transferred from the Royal Dublin Society to the committee of lectures; but it seemed to be a fund, the appropriation of which was already defined, and which was thus beyond the immediate control of the Department.

1063. It was handed over to the committee of lectures to be administered at their own discretion, in the manner they thought best to promote the object for which the committee of lectures was appointed?—I believe so.

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1064. Have you given this much disputed question of the amalgamation of the two institutions, the Museum of Irish Industry and the Royal Dublin Society, much consideration?—I have thought of it a good deal.

1065. You yourself are a man of practical science, I think, and have paid a great deal of attention to mineralogy in its optical and physical relations, have you not?—To some extent.

1066. If you were thinking of founding a school of practical science, would you put it under a body composed as the Royal Dublin Society is, that is to say, if you were beginning *de novo*?—I do not see why I should not; there would be some obvious advantages in such a connexion.

1067. Do you consider that a society which is composed of a fluctuating council, and with fluctuating committees to regulate scientific education, is the proper method of giving that education?—I think it right to say, in the first instance, that the idea of amalgamation originated first in the House of Commons, with an English Member; and that the society never sought it directly or indirectly. But if the Government should think fit to hand over the educational functions in science which are now administered in the two institutions, exclusively to the Royal Dublin Society, I am quite satisfied that the Royal Dublin Society would be both able and ready to carry them out.

1068. How is the education at Trinity College managed?—It is under the management of a Board, consisting of the provost and seven senior fellows.

1069. A permanent Board?—A permanent Board.

1070. Would you consider it expedient to give to the senate the power to determine the education to be given in Trinity College?—To some extent, I should have no objection; the senates in the English Universities have the power of electing professors to a considerable extent.

1071. To a certain extent, you think professors might be elected by the senate?—I do.

1072. Do you look upon the Royal Dublin Society as a scientific society?—No. It is a society composed of noblemen, country gentlemen, professional men, and mercantile men, and therefore brought together from all classes; it is not at all a scientific institution in the sense in which the Royal Society or the Royal Irish Academy is, in which no person can obtain admittance unless he has, or is considered to have, a certain amount of scientific knowledge.

1073. Are you in the habit of attending the scientific evening meetings at the Royal Dublin Society?—I am not.

1074. Do you belong to the Royal Irish Academy?—I do.

1075. Do you ever attend its meetings?—I have, frequently. I was president of that body for some years.

1076. Do you think, as a general rule, that scientific men in Ireland take part in the evening scientific meetings at the Royal Dublin Society?—I am not very conversant with the proceedings at the evening meetings. I think the scientific lectures given there relate rather to the practical application of science than original researches in science; but their character is not very strictly defined.

1077. You are not yourself in the habit of attending those evening meetings?—I am not.

1078. Could you tell the Committee how often you have attended them in your lifetime; have you attended them a dozen times?—No, I have not; I know them only through the published account of the proceedings.

1079. You mentioned Dr. Robinson, of Armagh, in connection with the proceedings of the provincial lectures; he is a very eminent man in science, is he not?—He is, undoubtedly.

1080. Is he a member of the Royal Dublin Society?—I do not know.

1081. Is Lord Rosse?—I do not remember; I never saw him there.

1082. Is Sir William Hamilton?—I believe Sir William Hamilton is.

1083. You have heard the evidence just given with regard to the attendance of students of Trinity College at the lectures given by Mr. Scott, at the Royal Dublin Society?—I have.

1084. You have, I think, a professor of mineralogy at this present moment at Trinity College?—Yes.

1085. Dr. Apjohn?—Yes.

1086. Dr. Apjohn is a very eminent man in science, is he not?—He is.

1087. He has published a catalogue raisonnée of the mineralogical collections of Trinity College?—He has.

1088. Illustrated by his own analyses and experiments, especially for the use of the students of mineralogy?—It was generally for the use of the museum, and of course for the use of the students in mineralogy.

1089. The lectures on mineralogy are part of the curriculum of the engineering diploma at Trinity College?—They are.

1090. Am I to infer from the evidence we have just received from Mr Scott, that a sufficient education is not given within the walls of Trinity College, but that the students must resort to the Royal Dublin Society to obtain it?—Education in Trinity College is in general more abstract, and of a higher order, than that which is given at the Royal Dublin Society; at the Royal Dublin Society there may be more of a practical character given to the instruction than in the University; but of this I am not quite certain.

1091. Do you think that the university education in science requires to be supplemented by those lectures at the Royal Dublin Society?—I do not think that it requires to be so supplemented; it may perhaps not be as practical as in the other institution; of that I am not prepared to say; but we are able in Trinity College to make such additions to our system as would make it complete, and independent of all others.

1092. Sir *Edward Grogan.*] Are these the names of the gentlemen comprising the committee of lectures; the Lord Chancellor, the Chief Secretary, Sir Richard Griffith, Sir Robert Kane, Lord Talbot de Malahide, Lord Justice of Appeal, the Vice Provost of Trinity College, the Professor of Experimental Physics in Trinity College, Dublin; the first four gentlemen being appointed by the Government, and the other four being appointed by the society?—Yes.

1093. They have continued the committee of lectures from the establishment of that committee in 1854, have they not?—They have; they are re-elected every year; but there has been no change except in my own instance. Dr. Sidney was at one time a member of the committee; the committee

committee wished him to act as secretary, and in that way there was a vacancy on the committee, which I now fill.

1094. That has been the only change in the constitution of the committee since its appointment?—I believe that has been the only change.

1095. I need hardly ask you if the practical working of this committee through the country has been found satisfactory?—Quite so.

1096. You think it competent in all respects to direct the course of scientific education given in Ireland?—Quite so.

1097. The letters and the reports you have referred to all bear the same testimony?—They do.

1098. You are clearly of opinion that those provincial lectures are of great importance in the education of young men in scientific attainments in Ireland?—I believe they are.

1099. They develope any disposition that may exist towards scientific study?—Certainly.

1100. Except for the existence of that committee, and the provincial lectures so arranged by them throughout the country, could the successful results that attended the examination in the science schools possibly have taken place, in your opinion?—I think not. But I should add that we owe much of the success of the operations of the committee to the labours of Dr. Sidney, as secretary.

1101. To personal exertions he himself made to carry out the arrangements?—Yes.

1102. What has been the result, in a pecuniary point of view, of those schools of science; have they proved remunerative?—No.

1103. Could they have existed in the country, except for the personal exertions of Dr. Sidney?—I think not. The schools have been eminently successful as regarded the success of pupils at the examinations, but not successful in a financial point of view.

1104. The object being the scientific education of the people of the country, do you think that the Government ought to make the finance the primary consideration?—Certainly not; I think economy in education is a matter of secondary consideration.

1105. You illustrate that by the examples of universities and national schools?—Yes; I think the same principles which have directed the Government to aid in maintaining the education of the higher and of the lower classes should operate also in this instance.

1106. Those provincial lectures were established as long back as 1836, were they not?—They were established in 1836, in consequence of the recommendation of the Select Committee of the House of Commons in that year.

1107. And they have been in full operation since?—Yes.

1108. They underwent a change in 1854 by the establishment of the committee of lectures?—Yes. They were at first under the sole management of the Royal Dublin Society. Afterwards, in 1854, it was proposed by the Department of Science and Art to transfer all the educational functions of the Royal Dublin Society to the Museum of Irish Industry. The Royal Dublin Society strongly remonstrated against such a course, their professorial system having been for so many years part, and, as they conceived, a very successful part, of their operations; and ultimately a deputation waited on the Department to represent the views of the society on the subject, and a compromise was agreed to, which resulted in the appointment of the committee of lectures, four members of which were appointed by the Royal Dublin Society, and four by the Department of Science and Art.

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1109. When those provincial lectures were established in 1836, was there any grant to enable them to be carried out?—In 1836 a grant of 500 *l.* was allocated to the Dublin Society for the purpose.

1110. For the express purpose of carrying out this system of provincial lectures?—Yes.

1111. And a subsequent increase of 400 *l.* was given to the Department of Science and Art for premiums to pupils?—The increase of 400 *l.* was made after the system had been brought into connexion with the Department of Science and Art; it was given more particularly for the purpose of maintaining a system of examinations in connexion with the lectures.

1112. For rewards of different descriptions, money premiums and medals to distinguished pupils?—Yes, and also for the remuneration of the examiners, who are a distinct class from the professors who deliver the lectures.

1113. That 400 *l.* has been since withdrawn?—It was withdrawn in 1861.

1114. Not in consequence of any failure of the system in disseminating scientific knowledge?—Not, as we think; the Department of Science and Art objected to the system, but upon that point there was some difference of opinion between the committee of lectures and the Department.

1115. So that, in fact, so long ago as 1836, 500 *l.* was allocated for provincial lectures throughout Ireland, and, in 1864, we are in the same position though the necessities have so much increased?—That is so.

1116. The grant is not larger?—No, it is the same as it was originally.

1117. It having in the interim been augmented by 400 *l.*, but which augmentation has been since withdrawn?—Just so.

1118. That withdrawal of 400 *l.* must, I presume, have materially interfered with the advantages to be derived from those lectures?—Undoubtedly it did, even 900 *l.* is a small sum for such a work, and it was necessarily restricted in consequence.

1119. Were there any special reasons assigned for the withdrawal of that money?—The reasons assigned were; that the Department of Science and Art had itself established a general system of examination throughout the kingdom, and, that they considered the special system of examination which we had established unnecessary.

1120. Very good results were found to follow the system you had established?—That is my opinion.

1121. Have you any reason to expect a continuance of these favourable results as regards the science and art schools?—We have; but, I should say, that there has been a double difficulty; we have experienced the difficulty which has been experienced in England, namely, that the remuneration is not sufficient to maintain teachers independently of other means of support; and we have experienced the further difficulty which I have already referred to; viz., that the remuneration of the teachers was, by the rules of the Department, limited to cases in which operatives were the pupils. But, notwithstanding these

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difficulties, I think there is some prospect of succeeding by the mode which is now adopted, that is, by the establishment of local resident teachers in the towns; men who have other employments in the day-time, and who can devote their evenings to this work.

1122. That is an experiment at present being made?—Yes, and to which Dr. Sidney has devoted a great deal of his time.

1123. In how many towns in Ireland has that experiment yet been made?—Eight, I think; from the commencement there have been more than eight, but there are eight schools at present in operation on that system.

1124. That system being, that the local teacher is permitted to have science pupils and is to be rewarded according to results?—Yes, but they are local teachers who have other employments in the day, and who give a portion of their time in the evening to this work; if they had no other employments they would not be sufficiently remunerated to be able to undertake the duty.

1125. How are the expenses attending local schools, the room, the lights, the attendants, and so on, provided for?—They were originally provided for, in part, at least, by the local committees; but I do not know to what extent.

1126. Were the difficulty of furnishing those appliances and the uncertainty of the remuneration of the teachers the grounds on which there was reason to apprehend the failure of those schools in Ireland?—Yes; the teachers themselves were unwilling to undertake the risk of the expense.

1127. Have these been found serious difficulties in the way of establishing such schools in this country to your knowledge?—They have.

1128. There is no reason whatever to imagine those difficulties would be less in the case of Ireland?—No, I should say they would be greater.

1129. Are the class of pupils who might naturally be expected to frequent those schools in this country as numerous in Ireland as here?—By no means.

1130. Consequently teachers would have less probability of receiving remuneration?—Certainly much less.

1131. Those are the difficulties to be apprehended in the establishment of those schools?—They are.

1132. Do you think that the system is as applicable to Ireland, in its present state, as it is to Great Britain in its present state?—I think the system is less applicable to Ireland than to England, on account of the smaller number of persons in the artisan class.

1133. Except for the personal exertions of Dr. Sidney, I believe some of those schools you have referred to would have been discontinued the second or third year?—Some of them have been discontinued, and others are likely to cease.

1134. I understand the system to be this: there is a local committee to undertake the expense of furnishing rooms and appliances for the school work; and then they employ the teacher; is it the case that those committees have lately been unwilling to take upon themselves those expenses?—Yes. Difficulties have arisen, both on the part of the committees and on that of the teachers. The teachers are sent down by our committee, and generally at first with the promise of a small salary in addition to what they obtained under the Department. We could not induce teachers to undertake the work solely upon the remuneration given by the Department, and we were obliged to supplement it by aid from our small grant of 500 *l.*

1135. Do you at this moment grant a small aid from your funds, in aid of the system?—We do so in the case of certain of the teachers; but it is hoped that, if the experiment of evening teaching be found successful, we may be enabled to dispense with it.

1136. You think it desirable to give the experiment of schools of science a fair trial?—I do.

1137. Do you think there can be any doubt of their ultimate success?—I think it important to give the school system a fair trial; but I think the experiment a somewhat doubtful one.

1138. You are one of the vice-presidents of the society?—I am.

1139. Did you ever know the operations of the society, as a body, to be influenced by sectarian or religious feelings on the part of any of its members?—Never, since I became a member.

1140. Or that religious or sectarian questions have ever been introduced?—Never.

1141. Very few individuals have been refused admission into the society?—I believe, since the Union, there have been but six persons excluded by the ballot. There were four persons excluded previous to 1836, and since 1836 two were excluded, In one of the latter cases the exclusion was the result of a mistake, and the individual was afterwards admitted, so that really there have been only five exclusions.

1142. How many professorships at present are there attached to the society?—Two.

1143. What are their salaries?—£. 150.

1144. The Committee of 1836 recommended an increase of the salaries of the professors; have the society ever been in a position to carry out that recommendation?—Never. The grant, which was 10,000 *l.* (Irish), from the time of the Union to 1819, was reduced in 1819 to 7,000 *l.*, and in 1831 it was further reduced to 5,300 *l.*; and at the same time the salaries of the professors were reduced from 300 *l.* (Irish) to 150 *l.* (British). The Committee of 1836 recommended that these salaries should be restored to their original amount.

1145. And you have never been able to carry that recommendation out?—No. The society felt the reduction, very sorely, on account of the reduction of the salaries of the professors which it entailed; but they have never been able or authorised to increase the salaries.

1146. I perceive, in the Report of the Commission of 1862, a great deal of evidence is given to the Commissioners with regard to the mode in which the lectures are given in Dublin, some in one locality and some in another. Has that system worked satisfactorily in your opinion?—I think there are certain disadvantages in it; the double locality is a great disadvantage, and I think also the divided authority is a further disadvantage. The lectures are partly under the control of the committee of lectures, and partly under the control of the director of the Museum of Irish Industry. The technical lectures are under the latter control, and the popular lectures, whether given in Dublin or in the provincial towns, are under the control of the committee of lectures.

1147. Would you think it preferable that the lectures

lectures should be delivered in one locality instead of two?—One locality for each course certainly; there are great objections to the double locality. I think that the professors should lecture in connection with the museums, which illustrate their several subjects; the professor of zoology, the professor of mineralogy, and the professor of botany should, I think, lecture in connection with the collections pertaining to those sciences respectively.

1148. You mean, that the professor should deliver his lecture in the locality where the museum is?—Certainly; the museum illustrative of his particular science.

1149. Allusion was made to a gentleman connected with the Science and Art Department being sent from this country to superintend or supervise the proceedings of the committee of lectures in Ireland, is it habitual to send such an inspector, or was it only an occasional visit?—This has been done lately only; it was not the original practice.

1150. It was possibly an occasional visit to see the state of the system, and how it was working?—There may have been a desire on the part of the Department to direct more immediately the operations of the schools.

1151. Have your committee any reason to feel dissatisfied at the supervision of your system by the Department of Science and Art?—I cannot answer that question categorically. The committee have certainly differed from the Department upon the advantages of their own mode of operation, and that difference has led to some correspondence. We have not, I fear, satisfied the Department that our system was a good one, neither have they satisfied us that the school system is the only one applicable to Ireland.

1152. Was it on the application of your committee that that inspector came over, or was he sent without any communication with you?—He was not sent on the application of our committee.

1153. Was any report made?—I presume, he reported to the Department.

1154. Has the purport of his report ever been communicated to you?—No.

1155. Were you at all surprised to hear that some students in Trinity College attend the lectures of the gentlemen who lectures on mineralogy at the Royal Dublin Society in order to improve themselves?—It was new to me.

1156. Is it not a proof of the anxiety of young men to perfect themselves, as far as they can, in the particular subject of their studies?—I can understand it upon the supposition that they find the lectures and demonstrations in the Royal Dublin Society in some respects more practical than in Trinity College.

1157. They have the facility of handling the mineralogical specimens, for instance?—Yes; so I understand, and also I account for it from the fact that the collection of minerals in the museum of the Dublin Society is more extensive and more valuable than that of Trinity College.

1158. The gentleman who lectures on that subject at the Royal Dublin Society told us that he gave a special course of lectures on smelting; have you anything of that kind in Trinity College?—No.

1159. Would that, in your opinion, account for the attendance of young men there, and show that they were anxious to acquire a knowledge of that particular branch of study?—I think it would to a certain extent.

1160. Are you intimately acquainted with the whole of the arrangements of the Royal Dublin Society?—I know them generally; I can hardly say that I know them intimately.

1161. In the selection of the committees, are the members generally selected because they are supposed to be qualified and competent to undertake that duty?—Yes.

1162. That is the wish of the Society?—It is. I ought to say, however, that if the recommendations of the Treasury Commission were to be carried out, I presume the Society would form a special committee for the superintendence and conduct of those lectures; a special committee, composed partly of scientific men and partly of men of social position, whose views would have weight with the professors, and that their operations would not be left to the management of the committees, as they are constituted at present. Hitherto the direction of the professors of the Royal Dublin Society has been left to the committee of the particular department; but I apprehend that would not be the course adopted by the society in the case of an extension of its educational functions.

1163. As vice-president of the society, are you aware that complaints have been made in different departments of their inefficiency and inability to carry out the objects of the society, owing to the want of funds?—Yes, the efficiency of almost all our departments is limited by want of funds.

1164. In fact, your operations in the educational department are materially impeded?—Yes.

1165. It is necessary, for its efficiency, that some additional grant should be made?—It is quite necessary.

1166. If the Government undertook to supply the funds necessary for the full and efficient discharge of the duties of the Dublin Society, would you see any objection, as vice-president of that society, to placing in the hands of the Government full control over the allocation and appropriation of the funds so granted?—Certainly not.

1167. Would such an arrangement, the Government supplying the necessary funds for the conduct of the society in its full efficiency in its separate departments, and leaving the private subscriptions to the allocation of the society itself, prove satisfactory to the society and the public, and beneficial to all parties?—I should rather see the allocation of the private subscriptions of the members accounted for to the public, as well as the public money. But on this I only give my own opinion.

1168. You would wish the whole of the departments of the Royal Dublin Society to be carried out in their fullest efficiency?—Certainly.

1169 And you think the present funds at their disposal inadequate for those purposes?—I do, certainly.

1170. *Chairman.*] With regard to the science schools, what control has the committee of lectures, or what power of interference has the committee of lectures with those local schools?—In the first instance they are established under their supervision. It was a recent duty imposed upon them, which they undertook at the request of the Department.

1171. Mr. *Dillwyn.*] Assuming the recommendation

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mendation of the Commissioners to be adopted, that all Government grants in aid of science and art at Dublin should pass through the hands of the Royal Dublin Society, should you or not agree with what Dr. Corrigan said, that you would feel it your duty, if you saw any one of the societies for which those funds were handed over to the Royal Dublin Society for administration going on in a way you did not approve, to make a representation to the Government upon that maladministration?—I think the expression in the report is rather ambiguous. I understood it to mean, that if the council of the particular society had any want, or required the Government interference on any matter, they would make it known to the Government through the Council of the Royal Dublin Society. I thought that was the tenor of the recommendation; at the same time, I should say, that the recommendation itself was unpalateable to all parties. It was unpalateable to the several societies; not only to the Zoological Society, but to the Royal Irish Academy and to the other societies concerned; and the Royal Dublin Society did not like it at all.

1172. Supposing that a greater amount of power and patronage, by the allocation of those funds, were placed in the hands of the Royal Dublin Society, should you still have the same confidence in the selection of the names of the managing committees being as unexceptionable in the future as heretofore?—I think, in that case, the Society would act through the Council. We are in somewhat a transition state as to the constitution of the Council. There was a recommendation made by the Treasury Commisssioners that the Council should have fuller power than it has at present, and that it should be able to act absolutely on the part of the Society, the Society having at the same time the fullest control over the selection of members of the Council.

1173. The joint committee of lectures is appointed partly by the Crown and partly by the society at large?—Yes.

1174. Do you think that the society at large would make as good a selection if more patronage and power were attached to the society?—The fact is, that they have never altered the committee.

1175. I am assuming the case of a greater amount of patronage and power belonging to the direction?—I do not know that the patronage is of a kind that they desire, or that they would feel much anxiety to retain.

1176. Mr. *Lefroy.*] Am I not right in inferring that your opinion differs from that of a former witness, which was to this effect, that the constitution of the Royal Dublin Society being a popular one, renders it unfit to conduct education in scientific subjects?—I am compelled to dissent from that opinion.

1177. Is not it the case that although the constitution of this society may be considered a popular one, and therefore not perhaps on that ground, the most suitable for presiding over scientific subjects, it practically contains in itself some of the most distinguished scientific men in the country; and are they not generally on the committees, so as to have the superintendence of those subjects?—There is quite a sufficient number of scientific men in the society to carry out, under the direction of the society, any scientific operation that may be desired. If our functions, as an educational body, were enlarged, the professors would probably be, for the most part, the same as they are at present. The conduct of the system would, I conceive, be confided to a permanent committee, composed, as I said before, partly of scientific men, and partly of men of social station; and, therefore, neither as respects the teaching nor as respects the conduct of the system, would the public lose in any respect by the change.

1178. Thus, in practice, the constitution of the Society being popular does not make it less effective in its scientific instruction?—I think not.

1179. Sir *Colman O'Loghlen.*] You stated that you were on the Council of the Royal Irish Academy?—Not at present; I have been.

1180. Were you last year?—Not last year.

1181. Do you happen to know whether the Council of the Royal Irish Academy have taken any action in respect of that report of the Treasury Commission?—They have strongly objected to it.

1182. Have they sent in any representations to the Government?—They have; all parties object to that particular clause.

1183. With respect to the Library of Trinity College, is it not open to the public?—It is not open to the public for the purpose of reading; it is open to all students of a certain standing.

1184. It is not open to the public?—It is so far open to the public, that anyone can be admitted to the privilege of reading, on the recommendation of two fellows, that recommendation being brought before the Board.

1185. Does the Trinity College Library receive any grant from the Government?—No pecuniary grant.

1186. Mr. *Lefroy.*] It is open to members of every other university?—Yes.

1187. Major *O'Reilly.*] Of right?—Yes, by a general rule. I mean to members of the universities in correspondence with the Dublin University; my remark as to right refers only to Oxford and Cambridge.

1188. Sir *Colman O'Loghlen.*] A member of the London University has no right to be admitted to the Library?—No, not as such; but he would have no difficulty in procuring admission.

1189. Mr. *George.*] Were you examined before the Commission of 1862?—No.

1190. You had no opportunity of expressing before them the opinions you have now expressed to the Committee?—No.

1191. You were asked by the Chairman your opinion upon the subject of the amalgamation of those two societies, the Royal Dublin Society and the Museum of Irish Industry; do I understand you rightly to say that your opinion is that that amalgamation would be desirable?—I think the question of the amalgamation is one of general policy, rather than one on which a scientific man has any peculiar means of information; and, as vice-president of the Society, I would rather not express an opinion upon the question.

1192. Supposing that it were thought desirable to impose upon one society the various duties now discharged by the Royal Dublin Society and the Museum of Irish Industry (I mean with reference to the diffusion of scientific education by lectures and the various means which have been alluded to), do you not consider that the Royal Dublin Society would be a fit body to discharge those different duties?—I certainly do; and I think, further,

further, it would have an advantage over other bodies, on account of its collections.

1193. You set more value than was set by another witness who was examined here to-day upon having the lectures delivered where the different scientific collections are to be found?—I do.

1194. A lecturer would have very great advantages in having a large collection of minerals, and a large museum, by which to illustrate his lectures?—I think so.

1195. The Royal Dublin Society possesses, I believe, a very good if not a perfect collection of minerals, and a large general museum?—It possesses a very fine collection of minerals. Its museum and botanic garden have been made available to the professors under the Department of Science and Art for the illustration of their lectures, and every facility has been afforded to the lecturers; but there are difficulties arising from the difference of locality.

1196. Do you consider that the double establishment which now exists of double lectureships, double collections, and double buildings, and all grants incident to it, is desirable or otherwise; or do you think it a waste of public resources that might be better husbanded if those things were carried on under one management?—There is not, practically, a double staff of lecturers. There are five professors under the Department of Science and Art, and two professors in connection with the Royal Dublin Society; but there are not duplicate professors. The collections are to a certain extent duplicate.

1197. There is to a certain extent a double management, those professors being in part under the control of the Royal Dublin Society, and in part under the control of the Museum of Irish Industry?—No doubt there would be a saving of expense in respect of the managing staff in case of amalgamation.

1198. *Chairman.*] The collections are arranged upon two different principles, are they not?—They are. The minerals and rocks in the Museum of the Royal Dublin Society are arranged according to their scientific relations. I am not acquainted with the collections of the other museums, but I believe they are for the most part arranged with reference to economic relations.

1199. The arrangement of the one is in conformity with the arrangement at the British Museum, while the arrangement of the other is in conformity with the collections in the museum at Jermyn-street?—I should say so; each collection having its own object and end in view.

1200. Mr. *George.*] If it were thought desirable, do you see any unfitness in such an institution as the Museum of Irish Industry being annexed to the Royal Dublin Society; do you not consider that they would be a very fitting body to have such a practical collection in connection with them?—I think the public would not lose in any way by the arrangement.

1201. Mr. *Waldron.*] You were asked if certain eminent persons were or were not members of the Royal Dublin Society. Look at that list of the members of 1863 (*handing the same to the Witness*); do you see the name of Sir William Hamilton?—Yes; I was under the impression that Sir William Hamilton was a member.

1202. And Dr. Robinson?—Yes.

1203. You were President of the Royal Irish Academy?—I was.

1204. Will you read those questions and answers in the report of the Committee of 1836 (*handing the evidence to the Witness*). It is there suggested that funds should be given for the purpose of printing some of the old manuscripts, of great value, which now exist in the libraries of Trinity College and the Royal Irish Academy; do you agree in that recommendation, that it would be desirable to allocate funds for that purpose?—In connection with the Royal Irish Academy, there has been a commission for the publication of the Brehon Laws. The Government are printing the Brehon Laws.

1205. Except out of the funds at the disposal of the Master of the Rolls in England, none of those old manuscripts, of great value, could be published?—The funds at the disposal of the Royal Irish Academy are wholly inadequate for the purpose.

1206. Do you think it would be desirable to allocate a sum for that special purpose?—I do; in all foreign countries the original historical records are highly prized, and it seems an important object to secure, by their publication, their continued existence; they are at present in manuscript, and their existence is therefore precarious.

1207. Some of them, I believe, are becoming deteriorated from great age?—Yes.

1208. Almost illegible?—Yes.

1209. It would be desirable that copies of those should be preserved?—I think so; manuscript copies of many of them have been made.

1210 Sir *Edward Grogan.*] Is there any growing interest in the subject of those old records in Ireland, in your opinion?—There are several members of the Royal Irish Academy devoted to antiquarian pursuits, and they are very zealous on the subject; I think, to a certain extent, their interest is shared by the public.

1211. The society, as a society, have not any funds at their disposal, to enable them to print those manuscripts?—No.

1212. You stated that the Government are printing the Brehon Laws; with that exception, it is the only grant or assistance that has been given towards the publication of those ancient records?—I believe so.

1213. In an historical point of view, you think it is desirable that they should be preserved, by being printed?—I should say so; but I have never given much attention to antiquarian subjects; and I am not sufficiently acquainted with them to make my evidence of much value.

1214. Mr. *George.*] Three volumes have been printed of ancient records, under the superintendence of the Master of the Rolls; have you seen them?—I have not.

WILLIAM BARKER, M. D., called in; and Examined.

1215. *Chairman.*] WHAT is the general nature of your position and your duties, as regards the Royal Dublin Society, and the Museum of Irish Industry?—I am Professor of Physics in the Museum of Irish Industry; and, as regards the Royal Dublin Society, of which I am a member, I lecture there during part of each session.

1216. Were you on the Council of the Royal

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Dublin Society, when Mr. Scott was appointed as *locum tenens* for Dr. Scouler, professor of mineralogy?—Yes.

1217. Dr. Scouler had been absent from his post about eight years?—Yes.

1218. On what evidence of the necessity of special lectures upon mineralogy did the Royal Dublin Society proceed in their election of a gentleman to fill the place of Dr. Scouler, after this interval of eight years?—I am not aware. There was a sub-committee appointed, composed, I think, of Sir Richard Griffith, the Rev. Mr. Haughton, and a third gentleman, who recommended the appointment of a *locum tenens*.

1219. Upon what ground?—I believe that such a lectureship was wanting.

1220. What part did you take with regard to that appointment; did you make any protest against it?—I objected to reducing Dr. Scouler's salary, to pay a professor without his (Dr. Scouler's) consent.

1221. Was it solely as regards Dr. Scouler that you protested?—Yes, to the best of my recollection.

1222. Not upon any other ground?—No.

1223. Were you a professor under the Royal Dublin Society before the year 1854?—I was professor from the year 1848, on the same subject.

1224. Natural philosophy?—Yes. I was appointed in the year 1840.

1225. You acted under the committee of natural philosophy, when you were professor?—Yes.

1226. How far did you find the committee in any way interfere with you in your functions?—It was supposed that they had control of the appliances and apparatus for the lectures; the programmes were submitted to them, and we used to consult about the subjects I proposed to take up, and the branches I would lecture upon.

1227. Were you always perfectly in harmony with the committee?—Yes.

1228. Which would you prefer, if you had your choice, to be under a fluctuating committee, such as the committees of the Royal Dublin Society, or to be under a scientific head?—Certainly under a scientific head.

1229. To receive your instructions from him?—Yes.

1230. Are you of opinion, speaking abstractly, without reference at all to any individual persons, that scientific instruction ought to be directed by a body which is both complex and fluctuating, such as is the Council of the Royal Dublin Society, and the committees?—I think the more simple the authority the better. I think that a fluctuating body is unfit to have the direction of scientific teaching.

1231. Under what committee are you at the present moment?—Under no committee for my systematic course.

1232. As a general rule, when you were formerly under the committee of natural philosophy, were the meetings of the committee well attended?—I think generally five or six attended each committee. The committee I was connected with met very rarely.

1233. Do you think giving additional strength to the executive body of the society, as is recommended in this report, would do away with the objections raised as to the composition of the committees in anyway?—It would diminish the evil of multiplicity of heads, but it would still be a fluctuating body.

1234. Your main objection to the system is, that it is fluctuating?—Yes; it must be fluctuating. The members of the committee are re-elected. Changes must take place every year.

1235. Complaints have been made every year with regard to the efficiency of the committees, have there not?—I have heard of them. I could not say of my own knowledge.

1236. Are you of opinion that a single head would exercise a control over the persons in the different departments far more general and direct than could be exercised by a number of gentlemen, whose attendance may be possibly irregular?—I think that the responsibility of a single person would make the superintendence more complete than that of a fluctuating body.

1237. Did you ever hear that great fault was found with the state of the mineralogical collections of the Royal Dublin Society in former days under Sir Charles Gresécke?—It was before my recollection; but I know that the museum was in a very bad state when Dr. Carte became a director.

1238. Are you aware that General Portlock, in his evidence before the Committee of 1836, alluding to the faulty state of the mineralogical collection, stated that it was primarily the fault of Sir Charles Gresécke, but also that it was partly owing to the negligence of the committee not keeping Sir Charles Gresécke up to his work?—I am not aware of that. I know that when Dr. Carte became director of the museum the minerals were in a bad condition, many of the labels having been lost, mislaid, and displaced. I went over a great part of the collection with him.

1239. Do you think that an arrangement by which the Royal Dublin Society should have proper means to carry out its exhibitional functions with complete efficiency as to library, museum, and shows, and be at the same time entirely relieved from the direction of scientific education, would work well, and would meet with the approval of the public?—I should think it would.

1240. The lecture-room of the Royal Dublin Society might still be made available?—Yes.

1241. The laboratory might be left with the agricultural chemist, if it should be thought desirable to retain him?—Yes.

1242. He might make analyses, and do all the business connected with agriculture, without giving lectures, might he not?—Certainly.

1243. Do you think that the committee of lectures exercises any beneficial influence so far as the lectures in Dublin are concerned?—I believe that they interfere very little with the lectures in Dublin. The courses are arranged about June or July by the professors, and Sir Robert Kane, the director, and the draft is sent to the committee of lectures, who heretofore have always approved of it.

1244. What is your opinion with regard to gratuitous admission to the lectures; do you think it advisable?—I think it is advisable.

1245. Have you ever heard it urged that the presence of a large miscellaneous audience was calculated to induce the lecturer to dwell more on the popular part of his subject, and to neglect the elucidation of those dry elementary details, so necessary in all sciences?—At present the lectures

lectures are divided into two portions, one popular the other more strictly scientific. I think most of the lecturers arrange to begin with some subject that is popular, and the lectures are in that way better attended, and many persons induced to attend the systematic courses.

1246. The lectures at the Royal Dublin Society, are they popular lectures; and the lectures at the Museum of Irish Industry are the more advanced course?—They are. There are popular lectures also delivered in the museum; a portion of the lectures delivered in the museum are open to the public.

1247. I suppose that you are of the same opinion as some of the witnesses, that the present system of professors lecturing, partly at the Royal Dublin Society and partly at the Museum of Irish Industry, is necessarily an incongruous and inconvenient arrangement?—It is inconvenient to the lecturer, and inconvenient in necessitating the carrying of apparatus or specimens from one institution to the other at the risk of injury.

1248. Sir *Edward Grogan.*] As regards the public, no inconvenience could arise from having two lecture-rooms; they could attend one lecture-room as well as the other?—Yes.

1249. If General Portlock's allegation that the committee superintending the museum did not sufficiently interfere with their professor in keeping it in perfect order, is not that a proof that they did not unduly interfere with him in the discharge of his duties?—I should think so.

1250. Do you conceive that popular lectures are of very great advantage in inducing pupils to enter themselves in the special course for which fees are charged?—Yes.

1251. And as such assist greatly the advancement of scientific knowledge in the country?—Certainly; students are eliminated from the large classes to the paid lectures; you may have an average attendance of 200 at the popular lectures, and of those 30 or 40 will attend the subsequent course, paying the fee.

1252. Then, in fact, one, as it were, is ancillary to the other?—Certainly.

1253. The abolition of the popular course would not, in your opinion, be attended with good results?—No.

1254. Mr. *Dillwyn.*] You see no advantage in there being lectures in different places?—No.

1255. Do you see any advantage in it to compensate for the inconvenience?—I do not see any; there would be no objection to having certain courses delivered altogether in the Royal Dublin Society, and the other courses delivered altogether in the Museum of Irish Industry. Lectures on natural history might be given in the Royal Dublin Society, where the natural history collection is, and lectures on geology might be given in the museum. Lectures on physics might be given in the Royal Dublin Society, and lectures on chemistry in the museum.

1256. Sir *Edward Grogan.*] You think that an arrangement by which lectures were given exclusively in one place, on a particular subject connected with the collection attached to that place, would be most convenient; convenient to the professors, and also to the public?—Yes; the injury to the apparatus and the specimens would be avoided.

1257. Have you been a long time a member of the Royal Dublin Society?—Since the year 1847 or 1848.

1258. Are you able to express any opinion of its utility and value as a body, in its bringing together gentlemen of different professions and opinions?—Of great value; in that way people of every variety of opinion are brought together, and they work together harmoniously; they work gratuitously, and very zealously. *W. Barker, M.D* 2 May 1864.

1259. Is it within your knowledge that political feelings have ever interfered to break that harmony?—I have been on committees composed of gentlemen of all religious persuasions, and I never heard such matters even approached or alluded to.

1260. Do you think that any feeling of that kind influences the Society in its selection of officers or committees?—Not that I have ever heard.

1261. You were a professor of the Society?—Yes, I was; having succeeded Sir R. Kane in 1848; I was transferred in the year 1854 to the Museum of Irish Industry.

1262. Are you under the committee of lectures?—I am under the Department of Science and Art.

1263. Do you lecture in the country?—I do.

1264. You give provincial lectures in the country, under the Department of Science and Art?—Under the committee of lectures.

1265. Can you describe to us the arrangements that are made for the delivery of those lectures in any particular locality?—An application is first made to the committee of lectures for a course of lectures on a special subject, and the secretary of the committee ascertains what accommodation can be given in the locality. The applicants are obliged to pay some small sum for travelling expenses, and then the lecturer is sent down. They provide a room, and the lighting and the attendance.

1266. Are those lectures, so far as your experience has gone, well attended?—They are very well attended.

1267. Have you any doubt that those provincial lectures were mainly instrumental in the formation of the science schools afterwards?—I should think that they were.

1268. You believe that they have directed the the attention of those young men who have afterwards entered those schools to those subjects?—Yes.

1269. Would you go the length of saying, that but for those lectures, the success of the science schools would not have been so great?—I am quite sure of it.

1270. What may be the class of people who generally attend those provincial lectures?—A good many of the gentry of the locality, and a great many artisans, and also the advanced pupils in the national schools, and what may be called denominational schools. The provincial lectures are given in courses of nine or ten lectures.

1271. I believe that the lecturer gives also special instruction?—Yes; he holds examinations of the pupils.

1272. What may be the salaries of the professors at present?—£. 200 a-year.

4273. The Committee of 1836 recommended that they should be 350*l.*?—Yes.

1274. That recommendation has not been carried out for want of funds, I presume?—For want of funds.

1275. Mr. *George.*] You lecture at both societies?—Yes.

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1276. Is there any control upon the subject of your lectures, or any interference with the discretion you exercise in the topics you lecture upon?—We generally draw up, about the month of June or July, a syllabus of the course we will adopt for the following session, from November to July; and that is submitted to the committee of lectures, and I believe also submitted to the Department of Science and Art.

1277. Generally speaking, they approve of the outline of the course, and leave the details to you to fill up?—Yes.

1278. Before the year 1854, you were a professor under the Royal Dublin Society; did the committee of natural philosophy in the Royal Dublin Society at that period fill a somewhat analogous position with respect to you that this joint committee of lectures does now?—Somewhat; but the lectures under the joint committee of lectures are what are called the popular lectures; that is, the lectures similar to those formerly given at the Royal Dublin Society. It was made a condition, in the year 1854, that lectures were to be continued at the Royal Dublin Society, as previously to that period; consequently, I give 24 lectures there, and they are lectures over which the committee of lectures have control.

1279. Did the committee of natural philosophy of the Royal Dublin Society exercise any undue or improper influence over your discretion in the mode of lecturing, any more than this body does now?—Never.

1280. If you should be lecturing to-morrow under the Royal Dublin Society, would you apprehend that any improper influence would be exercised over you, in the management of your lectures?—I do not think it is probable, but could not give a positive opinion, as they are a changeable body.

1281. Would not fellows of the college, and scientific gentlemen connected with the society, who to a great extent would have the supervision of those matters, take care that that kind of thing was not done?—They might be on the committee.

1282. Without instituting any invidious comparison between the two societies, if it were desirable that lectures, as you state, should be given in one place, do you see any unfitness or impropriety in your lectures being given within the walls of the Royal Dublin Society?—I see no objection.

Jovis, 5° die Maii 1864.

MEMBERS PRESENT:

Mr. Cogan.	Major O'Reilly.
Mr. Dillwyn.	Sir Robert Peel.
Mr. George.	Mr. Waldron.
Mr. Gregory.	Colonel Luke White.
Sir Edward Grogan.	Sir Colman O'Loghlen.
Mr. Leader.	Lord Henry Lennox.
Mr. Lefroy.	

WILLIAM HENRY GREGORY, Esq., IN THE CHAIR.

The Rev. HUMPHREY LLOYD, D. D., further Examined.

Rev. *H. Lloyd*, D. D.
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1283. *Chairman.*] ONE of the questions that were asked you at the last meeting of the Committee related to the fitness or unfitness of the society, in virtue of its constitution, to have the direction of scientific education in Ireland. Another question referred to the future relations of the two Institutions which form the chief subject of the present inquiry. In reference to the latter question, your answer was limited to what the society could do in the event of the Government transferring to them the whole task of scientific education?—It was.

1284. Would you wish to state to the Committee what course you would propose should be taken in the other alternative—namely, supposing the Government resolved to maintain both Institutions?—If it should be the desire of the Government to maintain the two Institutions, I entertain a very strong opinion as to the advisability of preserving their respective functions altogether distinct, so as to avoid all possibility of clashing or interference. When the Museum of Irish Industry was first established, it was called the Museum of Economic Geology, and its functions were limited to the science of geology, and its applications to the arts. In the year 1853, as appears by the Report of the Treasury Commissioners, its title was changed to the Museum of Irish Industry, and its scope was altered so as to include all the industrial arts. By that step, the functions of the two Institutions were made to overlap one another, to a certain extent; and occasion was thereby given for the suggestion that one or the other of them might be suppressed or reduced. Thus, in 1854 it was proposed to withdraw from the Royal Dublin Society all its educational functions, and to transfer them to the Museum of Irish Industry. And in 1862 it was proposed by the Treasury Commissioners to abolish the Museum of Irish Industry and to transfer its educational functions to the Royal Dublin Society. If it should be the desire of the Government to maintain the two Institutions, it appears to me to be essential that such a separation of their respective offices should be agreed upon as would remove in future all occasion for these suggestions. It would not be difficult to define the scientific relations of the two Institutions in such a manner as to avoid that result. I think it seems to be quite clear that the professorships connected with natural history should be connected with the Society where the great Natural History collections are placed—the Botanical Garden and the Museum of Natural History. I would therefore venture to suggest that the Professorships of Botany and Zoology, as well as the Professorship of Mineralogy, should be connected with the Royal Dublin Society; and the Professorships of Physics, of Chemistry, and of Geology, with their applications, should be connected with the Museum of Irish Industry. By such an arrangement there would be a broad line of demarcation between the operations of the Institutions; the one teaching Natural History, and the other the Physical Sciences, with their applications to the Arts. I would only venture to add, that I think the Professorships connected with the Royal Dublin Society should be under the control of the Society itself; and that the Professors should be elected by the Society. For the management of the lectures generally, and especially of the provincial lectures, it seems desirable that the existing Committee of lectures, which represents the two Institutions, should still remain in operation, and thus, to a certain extent, form a bond of union between them.

Sir ROBERT KANE, M.D., F.R.S, Examined.

Sir *R. Kane*, M.D., F.R.S.

1285. *Chairman.*] You are the Director of the Museum of Irish Industry, are you not?—I am.

1286. Will you state briefly to the Committee the origin and objects of that museum?—In the year 1842 a Commission was issued to the present Earl of Dunraven, then Lord Adare, and some other gentlemen, to inquire into the circumstances connected with the suspension of the geological survey in Ireland, and that Commission requested me to communicate to them my ideas with regard to industrial education, and with regard to the materials for industrial education,

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cation, which existed in Ireland. I supplied to that Commission a report which is printed as an appendix to their report submitted to Parliament, and subsequent to that, on the recommendation of that Commission, the geological survey of Ireland, which had been suspended, was recommenced, and Government decided upon founding in Dublin a Museum of Economic Geology, generally speaking on the plan of the Museum of Economic Geology, in London, which was then situated in Craig's-court, Charing Cross. The geological survey was placed under the office of works of which the Earl of Lincoln, now the Duke of Newcastle, was Chief Commissioner, and he requested me to undertake the general direction and management of that Museum of Economic Geology. I had the honour of representing to him the substance of what I had previously submitted to Lord Adare's Commission, with regard to the importance of extending the objects of such an institution beyond the bounds of mere geology, and that such an institution would confer more benefit upon the public if it embraced the industrial arts generally. Lord Lincoln, however, informed me that the Government had for the time decided upon confining the objects of the Museum very much to those embraced by the Museum of Economic Geology, in London, but he pointed out that he contemplated that the institution should become a great national school of chemistry and science applied to the arts. Under these circumstances, I accepted the office of its director; but in 1847, when Lord Morpeth, now the Earl of Carlisle, became Chief Commissioner of Works, I submitted to their Lordships a recommendation similar to that which I had addressed to Lord Dunraven's Committee and to Lord Lincoln; and Lord Carlisle acceded to the suggestion that the Museum should be recognised as embracing in its objects the range of the industrial arts, and that its name should be so altered as to express those objects. I suggested to Lord Carlisle, at that time, that the name should be made the "Irish Industrial Museum;" but Lord Carlisle thought the word "Industrial" was not, strictly speaking, known in this country, that it was rather a foreign word, and he preferred the name of "The Museum of Irish Industry."

1287. Can the Museum at this moment strictly be called a Museum of Irish Industry?—In one sense it may; we desire to collect in it and to illustrate all the objects of the industrial arts which exist in Ireland, and of which there is any hope of being hereafter developed in Ireland. But in order to give a purely local collection its full value, it is necessary both to illustrate its contents and to supply its deficiencies by objects derived from British and foreign sources.

1288. Is the statement in the Report of the Commissioners of 1862 correct, that it was in 1853 that the name was changed to "The Museum of Irish Industry?"—No, it is entirely wrong; the name was changed in 1847. The Parliamentary votes for the Museum have been always taken ever since 1847 under the name of "The Museum of Irish Industry;" and all the reports have been made under that name since that time.

1289. Was Lord Lincoln Chief Secretary for Ireland in 1845?—He was Chief Secretary for a short time; I forget precisely the year in which he was appointed.

1290. Did Lord Lincoln at that time, in a letter which he wrote embodying the views of the Government with regard to this institution, advocate the necessity of separate establishments in London and in Dublin, and lay great stress upon local institutions of this character?—Yes; but that was in 1845, before he became Chief Secretary; it was while he was Chief Commissioner of Works.

1291. At that time the Museum was under the Office of Works?—Yes.

1292. It then was transferred to the Board of Trade, was it not?—It was transferred to the Board of Trade, about 1853 or 1852.

1293. And the last transfer was to the Department of Science and Art?—Yes.

1294. As regards your collections, will you give the Committee the history of the geological and mineralogical collections at present in your Museum?—A large part of the premises of the Museum is occupied by the offices and collections of the Geological Survey. At the same time that I received authority to obtain premises in Dublin for the accommodation of the Museum and its establishment, I was instructed that accommodation should be afforded in those premises for the offices of the Geological Survey and also for the collections which would be made in the progress of that Survey, though those collections were to remain strictly in charge of and under the entire control of the officers of the Survey, as they would require them constantly for reference until the survey was completed. Therefore, nearly one-half of the entire of the premises of the Museum of Irish Industry are really occupied by the Geological Survey, its offices, and its great palæontological and lithological collections.

1295. What are the relations of the Geological Survey to the Museum?—In so far as the general arrangement of the galleries of the Museum go, to the public eye there is no marked distinction between where the Geological Survey collection is and where the more purely technical collections of the Irish Industrial Museum are. The resident officer of the Museum has charge also of the offices of the Geological Survey; keeps them in order, supplies fires, and so on. Their various fitments are (I will not say entirely) provided, but to a great extent provided from the Museum funds; and the Local Director of the Geological Survey being also the Professor of Geology, I consider that he has a right to be supplied with the books that are necessary for lectures. Of course we cannot separate his function of Director of the Geological Survey from his function of lecturer; so we really supply to the Geological Survey a library such as is supplied to the Geological Survey of Great Britain, in Jermyn-street. Our library in the Museum is a library for the Geological Survey as well as for our own purposes.

1296. Have you, as Director of the Museum of Irish Industry, any control over those geological collections?—No; I do not consider that I have either control over or responsibility regarding the geological collections, which are entirely in the hands of Mr. Jukes. I have duplicate keys in my office of the cases of the geological galleries; but that is only for the purpose, I may say, of the security of the property, so that in case any accident occurred making it necessary to get the things out of the way or remove them from danger, and the key could not be found, the other key in my possession could at once be obtained.

tained. Beyond that I have nothing to do with the geological collections.

1297. Mr. Jukes considers Sir Roderick Murchison as the head of his department, does he not?—I presume so.

1298. I may, I presume, consider those collections as in a great degree topical collections?—They are not strictly arranged in the order of counties, and so on, but rather in the order of formations.

1299. Topical as regards Ireland?—Yes; they are topical as regards Ireland. We have a collection of British fossils. I should rather say the Geological Survey, for their own purposes, require to have a collection of British fossils, for the purpose of comparison with what they meet with themselves; to supplement their own collection, and for the purpose of identification of the fossils they may meet with in Ireland, to ascertain whether they are identical with or different from those in England. There is consequently a set of British fossils at the Irish Industrial Museum, as there is a set of Irish fossils at the Geological Museum in London.

1300. Do you attach much value to the principle of topical collections?—As a representation of the geological structure of a country, topical collections are indispensable. You cannot represent the structure of a country by any other kind of collections.

1301. What course is pursued in other countries with respect to the formation of what may be called topical collections?—At the Ecole des Mines, in Paris, the collections are arranged strictly topographically, and go to a greater detail than we even in London pretend to do, for there are exemplifications of the topographical geology of the individual Departments, not merely of the country at large, as regards the stratification and the fossiliferous character of the rocks, but even as regards individual localities.

1302. In this report of the Commissioners to inquire into the Royal Dublin Society, one of the grounds upon which the amalgamation is advocated is this—that both those institutions have extensive geological and mineralogical collections pretty nearly of the same character. Is that so?—That is stated in the evidence of one of the witnesses as a reason for consolidating the two institutions, and it is adopted by the Commissioners in their report; but I regard it as entirely groundless as a reason for amalgamation.

1303. You are, of course, intimately acquainted with the collections of both Institutions?—I cannot say that I am intimately acquainted with the Geological part of the Museum of the Royal Dublin Society. I should rather think it is not very extensive. They have a very fine collection of minerals; fine in the popular sense.

1304. Are you acquainted with the principle of the arrangement of the collections in both institutions?—Yes.

1305. Will you state in what manner one arrangement differs from the other in the two Institutions?—I have not myself any personal intimacy with the arrangements of the Royal Dublin Society; for I have rather avoided than otherwise any appearance of looking very much into the circumstances of their departments; but as far as I know the idea on which the Museum of the Royal Dublin Society is being arranged is this; in the case of the minerals, the arrangement is one of purely mineralogical relations; and in the case of the fossils of purely biological relations without reference to the localities from which each object may be derived, or the circumstances under which it may have been found. A principle of that sort, though very important with regard to the study of abstract science, entirely deprives the collection of practical application. The idea upon which a school of practical geology or a school of practical mineralogy should be arranged for practical purposes, and for the teaching of practical science, would be totally different. It should have from the commencement a definite relation to the uses to which those materials, whether minerals or rocks, are applied in the arts.

1306. Would you consider that one museum is arranged for the purposes of the physiologist and the other for the purposes of the geologist?—Yes; That in a brief manner would express what I intend to convey. One has relation to the cultivation of purely abstract science, and the other has relation to the practical uses to which the materials are applied in the arts.

1307. One is the principle upon which the collection in the British Museum is arranged, and the other is the principle upon which the collection in the Jermyn-street Museum is arranged?—Yes.

1308. Do you consider that the existence of two museums in the same locality, and arranged according to these distinctions, to be of value?—I consider that it accomplishes many and very important objects, which would be entirely lost if there existed but a single museum, whether that museum were conducted upon the one plan or the other, and above all a single museum which would be arranged upon a purely biological principle could have scarcely any practical value whatever, no matter how rich it was.

1309. One witness before the Commission of 1862 gave this answer, "It is for the interests of science, and illustrative of the history of the earth's crust that all the fossils should be brought together, and arranged according to their zoological affinities without reference to where they came from;" do you think that answer is correct, and do you agree in its import?—No, I do not think that answer is correct; I think, on the contrary, that fossils arranged in purely biological order would not at all serve for the illustration of the nature of the earth's crust. They would serve for an illustration of the manner in which vitality became developed and the mutations of form through which it may have gone, but they would be deprived of all relation to the circumstances of the earth's crust, its structure or its properties in regard to the formations in which those fossils have been found. If a person wished to illustrate or discuss questions of mutations of species, or the ideas of Darwin or Lamarck, or abstract problems of that sort, a museum of such kind would be useful, but if he wished to proceed to the study of the stratification of any portion of the earth, he would find himself entirely at a loss. No one fossil would have any definite connection with any formation or any rock.

1310. You believe that the amalgamation of those collections with the view to their being "arranged according to their zoological affinities," would be very prejudicial to the cause of science?—I think so.

1311. I suppose that Professor Owen would be quite as much astonished if he were told to amalgamate his collections with those at Jermyn-street as Sir Roderick Murchison would be, if he were told to amalgamate his collections with those

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those of Professor Owen at the British Museum? —I cannot judge of what their sentiments might be; I certainly would regard such consolidation as very injurious to the interests of science and the public.

1312. Are you aware that you were quoted as an advocate for amalgamation in a recent discussion in the House of Commons?—That can only have been in a certain sense.

1313. I will read the passages from your evidence before the Commissioners on that subject; you say, "I fully believe that if the amalgamation took place to-morrow, the public would not lose by the change, and the country would not look upon it unfavourably;" and you also state, "If these functions are handed over, I believe the Royal Dublin Society will administer them, ably and honestly, and that the position of the society would tend to give an amount of popularity to any of its acts which the more youthful institution might be long to acquire;" am I to understand from that, that you are an advocate for amalgamation; that you believe that the public would not lose by the change; and that the position of the Royal Dublin Society would give a greater amount of popularity to the amalgamated institutions than is likely to be acquired in the present divided condition of things?—I would beg leave to mention that the word "amalgamation" is used by the witnesses there, at least it was certainly used by me, and I think by other witnesses, in a very different sense from that in which it is used by the Commissioners in their report. By "amalgamation" I understood that the collections and the system of education now belonging to the Museum of Irish Industry should be preserved, and that the two institutions would coalesce, as it were, but that the sum total of museums, the delivery of lectures, and the conservation of the libraries, and so on, should still be maintained, and that the only difference would be, the elimination of myself personally. I cannot flatter myself that the public would lose much by that, and I think that the measure would be rather more popular than otherwise. I think there would certainly be no opposition to it. I could not flatter myself at the time that my elimination would be anything but popular with all parties.

1314. You meant by amalgamation, I presume, that everything should continue in the same course as at present, but that it should be placed under the direction of the Council of the Royal Dublin Society?—Yes.

1315. Had that answer of yours solely reference to your own personal position?—So far it had. I mentioned afterwards, what I believe to be the fact, that the Royal Dublin Society, so far as the body of members of the Royal Dublin Society are concerned, are very well disposed to do their best towards administering fairly and honestly any trusts that may be committed to them, and having reference to what have been the functions of the Museum so far, functions that, in my mind, have been hitherto merely provisional, I have no reason to vary from the answer I then gave. A society like the Royal Dublin Society, consisting of a large number of members, having meetings that are attended perhaps by 200 or 300 people, is always exposed to the chance of some disturbing element intervening. Some individual may get up and make a speech, which may give rise to a great deal of unpleasantness and embarrassment; but subject to that drawback (which is incidental to all popular bodies), I think that the general aim of the members of the Royal Dublin Society is to act honestly and fairly as far as they can. Of course, a large body like that can never have the directness of responsibility, or the energy of administration, that a single thoroughly responsible head of the institution should have. It is not in the nature of things that a large body can have the directive force and power of a single individual, nor can you impose upon them the responsibility of an individual; but subject to those conditions, what I said to the Commissioners at that time expressed the opinions I still hold.

1316. You are of opinion that the public would lose by the amalgamation proposed by the Commissioners in their report?—The recommendation of the report is, not amalgamation. It is the destruction of all industrial teaching; they propose the breaking up of the technological collections, and the scattering about of the objects in one place and another, so as to leave them without value altogether, and they propose the suppression of the most useful professorships. Altogether the scheme proposed by the Commissioners in their report, is one which, if carried out, I believe would inflict serious injury upon the public educational interests.

1317. With regard to the other collections in the Museum of Irish Industry, you have what are called industrial collections, have you not?—We have.

1318. Will you explain to the Committee the character and object of those collections?—Their object is to illustrate the raw materials used in each department of industry that exists in Ireland. In the first instance we take mineral industry. We exhibit the lodes and the structure of the rocks in the districts in which mines are situated, the veins in which the metallic ores are found, the nature of ores, their composition, their analysis, the process through which they go in their preparation for the market, the processes of smelting, to which the ores are subjected for the purpose of extracting the metals, and the more important uses to which metals are put in their subsequent applications in the various arts. We do that, for instance, with copper, representing the various localities in Ireland, in which that metal is found, and representing the localities in Cornwall, and some other districts in which it is similarly found; we do the same with regard to lead, and with regard to antimony, and with regard to tin, and all the important metals. Then we have a collection illustrating the fuels that are found in Ireland, and also collections illustrating the coal deposits of England and a part of the continent; and in association with coal, we give illustrations of the manufacture of iron. We show the different conditions under which the ores of iron are found, the various classes of iron ore, all the processes to which it is subject, and the principal uses it is put to, and the qualities of the iron produced. Then with regard to vegetable and animal industry, we follow out the cotton manufacture, and the flax manufacture; we exhibit the raw material as it is grown and imported, and we trace by a succession of specimens the stages of preparation through which it passes, up to the formation of the most important fabrics derived from it; we do similarly with regard to silk and wool. Of course in the carrying out of so very large an object, our progress has not been uniform in every part, and some portions of

of the Museum are still imperfect; but upon the whole, I think we have done within the time, at least as much as any other institution, not merely in this country, but even in Europe, has done with similar means.

1319. Do you look upon those industrial collections merely as intended for purposes of reference, or connected in any way with education?—In both ways. They are very useful for purposes of reference; and cases are continually occurring of persons who find minerals or other materials in different parts of Ireland, and who come to the Museum to compare them with what is there, for the purpose of getting information with regard to the locality in which they have been found, or with regard to similar localities in which they might be found. And within the last few years, since a question arose with regard to the supply of ironstone in certain parts of England, the number of persons who have gone from this country to examine the sources of ironstone in Ireland is very great, and the result, in fact, has been a very considerable export trade of iron-ore from Ireland to this country, to be smelted here. Cases of practical utilization of the Museum in that way are continually occurring.

1320. You have a valuable collection of marbles, have you not?—We have a very large collection of Irish marbles; and my idea of panelling the hall of the Irish Industrial Museum with Irish marbles had the effect of setting the example, which has been very largely followed, of using Irish marbles for decorative purposes in Ireland. In some new buildings erected in Trinity College some years afterwards, the idea was adopted, and in several of the churches both in Dublin and Cork, and in some other places, the same principle has been followed out. In fact, the exhibition of Irish marbles as used for decoration in the Museum in Dublin has led to the development of a trade of a very interesting character in the use of those marbles for decorative purposes.

1321. You have been speaking hitherto of those collections as collections of reference.. With regard to their educational purposes, how do you employ them?—In that respect, I require to give a little explanation. We employ the collections for educational purposes in two ways. We have adopted a system of very full labelling. Some years ago there was a resolution of the House of Commons (I believe, moved by Mr. Ewart), affirming that it was better to have a full system of labelling in museums than to be printing catalogues; and we got an order from the heads of our department, calling our attention to that resolution of the House of Commons, and directing us to commence acting upon it at once. We were enabled to report that what the House of Commons had then resolved we had done for some years, and that in the Museum of Irish Industry there was already a system of full illustrative labelling carried out, of which I sent over specimens, and which met with the full approbation of our superiors. We have, in addition to a system of illustrative labelling, also prepared catalogues. I have had the honour to lay on the table of the Committee specimens of some of the numbers of our catalogues that have as yet appeared. We have published three numbers of the catalogue, and there are a couple more numbers in preparation. I must say, since the publication of that report of the Commissioners, the officers of the Museum have not felt the same energy in cata-

loguing. They have said, "We see no great use in our cataloguing these things, when they are probably to be put in a cart and thrown away in a few months."

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1322. Are any of your lectures illustrated by specimens from those industrial collections?—Yes; the Professors make use of those collections to a great extent. They are taken out of the cases and exhibited in the lecture room; but we are anxious to avoid the necessity of that as much as possible. It is a great injury to the collections to have the specimens removed; if they are delicate specimens, they get broken, and if they are valuable specimens they are exposed in the carrying about to the risk of loss; we therefore in each department (Mr. Jukes has done it perfectly in his department, and it is being done in others), are organizing small special collections to be used by the Professors in their lectures, which will be all that is absolutely necessary to be shown upon the lecture table, in order to illustrate the lecture. Such an arrangement will allow the permanent collection in the Museum cases to remain absolutely untouched, avoiding thereby the risk of loss; the labels will not be disturbed, and the students having had before them what we may call the typical illustrations in the lecture room, will be able to follow out those illustrations in all their variety by reference to the cases in the permanent collection: where it can be at all done, any person who has experience upon the matter, would recommend that collections for illustrating lectures should be kept entirely distinct from the specimens for public exhibition.

1323. Assuming the Museum of Irish Industry to be continued, can you place any limit with regard to the future augmentation of those industrial collections?—I do not think that the development in magnitude of the collections need go very much further than what they now are, if all our collections were brought up to the same point of completeness. There are certain branches in which we are a little backward, and which would require to be brought up to a proper level. On the other hand, there are certain departments in which our collections are very complete. I do not think, on the whole, the space necessary for the satisfactory illustration of the industrial arts would require to be much larger than is now appropriated to it. I may mention that we have to do in the Museum more than what, as men of science, we would rather like to do. The sole test of success, I may say, in this country, is numbers. The only measure that Parliament has for the success of an institution is the number of people who go to it, and therefore a Museum is condemned to be made a kind of show. Now, one student who really uses the Museum for his education is worth a hundred people who would merely go to see it, as they would go to see a popular show in the street, and there has been, I think, too much stress laid in estimating the practical value of those Institutions, on the mere figures you read of in the Parliamentary papers, of the number of people that have walked through them. Therefore, if we had the power, I think my colleagues and myself would rather limit the growth of those collections, at least, keep them within moderate limits, and restrict them to the things that had a real *bonâ fide* scientific interest and object, eliminating certain things that are shown, but which really have not much scientific value. At present, however, we are obliged to cater, as it were, to popular taste, and make the Museum

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somewhat more of a show than we otherwise would desire to make it.

1324. You are of opinion that more solid advantages are to be obtained by the intellectual culture that a scientific museum gives than by the popularity of an exhibition calculated to attract a vast number of people?—Much more real value for the money laid out would be obtained by a moderate number of *bonâ fide* students visiting the Museum to learn.

1325. The object of those industrial collections, I presume, is, as it were, to give industrial instruction in Ireland, is it not?—It is.

1326. When you say industrial instruction, do you seek to confine that instruction to what are called the industrial classes, or would you extend it to persons in a rather higher sphere of life?—We have two classes, both in this country and in Ireland, that may be included under the head of industrial classes; we have the artizan class, and we have the class of employers of labour. I think it is particularly in Ireland of great importance that both classes should be educated, and especially that the middle class employers of labour should receive an education that would enable them to direct that labour in the most effective manner.

1327. Has there been a great want of scientific education experienced in England among the middle classes?—Very great; it scarcely exists. It is one of the greatest drawbacks to industry in this country.

1328. Has that want gone to that extent that we have been obliged to avail ourselves very extensively of the assistance of foreigners in works where men of scientific education are required?—Yes, enormously. If you go into any chemical or metallurgic works, either in the north or anywhere else, you will find that the management of a very large number of them, probably the half of them, are in the hands of foreigners, the chemical manufactures, the glass making, the manufacture of glue; and that, in fact, everything of real and great development, and great improvement, which has lately taken place in the chemical and metallurgic arts, has been due to foreigners. Even in London several of your leading chemists are foreigners. Dr. Hofmann and Dr. Voelcker, two of the highest chemical authorities in London at present, are Germans.

1329. The Committee of Council on Education in their letter of the 26th May 1863 say, "The lectures of the Museum of Irish Industry are spoken of as industrial. But after examining the facts of the case, my Lords concur in the opinion of the Commissioners, that the instruction cannot be strictly considered as applied, or industrial, in the technical sense;" and you are referred to as a witness to corroborate that conclusion: will you read the portion of your evidence which is quoted in support of that statement?—I was asked, "Do you consider it necessary, to qualify a person for the application of chemistry to the arts, that he should learn a course of scientific or abstract chemistry?—Most unquestionably. You must have a science soundly taught in its scientific principles, before you attempt to apply it at all. It is a great mistake indeed to suppose that the application of a science to industry is something of a lower standard than the knowledge of the abstract science itself. The contrary is rather the fact, because the problems to be solved in industrial science are more complex than those in the abstract science. Hence, unless the first principles of the science are taught with extreme care, you would break down when you came to make the application." I do not see that in that answer I gave any grounds for the Commissioners citing me in support of such a conclusion.

1330. One of the objections to this industrial education that has been raised is this: that elementary science instruction is provided by the general science system of the Science and Art Department, and that the middle as well as the industrial class can receive it in Ireland as matters now stand. Is that the case?—Not technical instruction. In the first place, the science-school system has been as yet so very little introduced into Ireland that it cannot be regarded as supplying education even to the artizan classes, who are the only classes that it could at all operate upon. The middle classes, the employers of labour, will never send their children to learn science in those ordinary science schools of the artizans. There certainly does not exist in Dublin, and I do not think there does exist in Ireland, any place outside the Museum of Irish Industry where education in applied science, such as chemistry applied to the arts, or metallurgy or geology applied to mining, or any other department of science applied to the arts, can be obtained.

1331. There seems to be a distinction drawn between practical and theoretical science in the letter of the Committee of Council on Education. Do you consider that it is possible to teach practical science, so called, without the person learning also the theory of science?—No; it would be absurd; you would have nothing to build upon. The very term "applied science" implies that you have something to apply—that you have already obtained general or abstract knowledge, which you then proceed to apply to practical use, to effect some practical object; and it would be utterly impossible to teach science as applied to the arts unless it was accompanied or preceded by a reasonable amount of instruction in science generally. From what I have seen of the Commissioners' report, I fear that there has been some confusion in the minds of the Commissioners with regard to applied science—as if it meant the actual manufacturing operations—as if, for instance in the case of the manufacture of glass, applied science meant that we were to teach a man how actually to take the blow-pipe and put the material at the end of it, and blow a decanter or a wine-glass. We do not pretend to teach that, nor do we pretend to teach anything that must be actually learned in the workshop; but our aim is to teach all the chemical and mechanical principles upon which the operations of the factory or workshop are based, to teach a knowledge of all materials used, and the principles upon which the different processes rest. That becomes an intermediate state between the abstract science on the one hand, and the actual manual operation on the other; and popular instruction, in that stage, constitutes really applied science, or technical instruction. The Commissioners appear rather to have jumbled the whole three together.

1332. It is stated in the same letter that it was never intended, when the Museum of Irish Industry was created, that it should become a college of science. From what you have stated with regard to Lord Lincoln's communication, are you not of opinion that it was intended to be a school

a school of science?—Yes. Lord Lincoln, in his letters, uses the expressions that the Museum was intended to become a national school of chemistry and science, applied to the arts.

1333. There is another paragraph, in which it says, "There are no circumstances in the condition of Ireland so exceptional to the rest of the kingdom as to justify a breach of the well-established principle of non-interference by Government with private enterprise." Do you consider that instruction given by means of Government aid is an interference with private enterprise?—In the actual state of Ireland, I would say, certainly not; and so far as my own individual opinion is concerned, I think it is one of the first duties of Government to supply means of education to its people. There is rather a confusion of ideas on that point apparently in that letter, for interference with private enterprise in the operations of trade would rather appear to mean a system of interference by bounties or protections, and an interference in trade operations, which of course no one would now contemplate; but so far as education is concerned, I do not think the Government supplying the means of education to the industrial classes in a reasonable way would at all interfere with private enterprise; it would, in fact, do what it is utterly impossible that private enterprise could undertake. Even in this country, where private enterprise is capable of so much, it has altogether broken down in every case in which it attempted to carry on scientific education.

1334. Would not the Queen's Colleges, to a certain extent, according to this reasoning, have been an interference by Government with private enterprise?—Entirely; they would be a flagrant case of interference.

1335. The main objection to the continuance of the present system of scientific education, as I understand, is this: that the artizan classes are already provided, under the Science and Art Minute, with sufficient education, and that it is a faulty principle to extend it to the upper classes, who are the only persons really availing themselves of it under the present system?—I would dissent from both branches of the proposition, decidedly. At present the artizan class is not provided with the means of education, and in the next place, I believe the best and most politic course the Government can take, is that of supplying to the middle industrial class the means of the fullest and most complete education in industrial arts that can be given. The reasons for that, of course, will occur to every member of the Committee.

1336. Do you think a central school, such as the Museum of Irish Industry might be made for scientific education, would furnish teachers to act afterwards under the Science and Art Minute?—It would; that would be one of the results. We have already trained two or three persons who have taken up the vocation of teachers of the Science Schools, under the Science and Art Minute; and those teachers have been found the most competent of the entire number in connection with the Science and Art Department: very remarkable results have been obtained at the examinations in the last two or three years in London, where the proportion of the prizes, carried off by the students who had been taught by masters trained in the Museum of Irish Industry, has been very much larger indeed than the proportion of the number of students or the number of teachers would have entitled them to.

1337. Was that in chemistry?—In chemistry, botany, physics, and several sciences.

1338. Had those pupils been instructed by a person educated in your institution?—They had.

1339. Do you think, therefore, that the instruction that would be given by your institution by means of lectures, would be to Dublin, pretty much the same thing as the provincial lectures are to the country?—I consider our educational arrangements at the Museum at present as being to a great extent provisional; they are not at all in the shape in which I should wish to see them, for our whole existence hitherto having been in a great degree a compromise, we have never been able to give the system of education the unity and simplicity it ought to have.

1340. What is the nature of the administration of the Museum?—The responsible administration of it is centred entirely in myself. The officers of it are, a clerk who is the resident officer and accountant, and a curator, who takes charge of the cataloguing, and the arrangements of the specimens, besides whom there are a certain number of porters. That constitutes the entire staff as regards the Museum purposes. Then we have the chemist of the Museum, whose time is now entirely occupied with teaching the classes of practical chemistry.

1341. What is the amount of the annual grant to the Museum of Irish Industry?—Generally speaking, 4,000 *l.*

1342. Are there not certain sums taken under that grant to your Museum, which are applied to other uses?—Yes; the grant to the Museum has the appearance of being much larger than it really is. First of all, there is 500 *l.*, which is at once transferred to the credit of the Committee of Lectures; then there is a sum taken in our grant for repairs, fitments, furniture and buildings. In the Royal Dublin Society, and in all other institutions, as far as I know, either the Board of Works here or the Board of Works in Dublin provide all the buildings and repairs, and fitments, and that item does not appear in the Vote for the special purposes of the institution; but in our case, we get nothing from the Board of Works, either here or in Dublin, and we are charged in our own direct vote with 550 *l.* under that head. That makes 1,050 *l.*, which appears in our own vote, though it would not appear in the vote of any similar institution. Then our professional staff are as much engaged in the service of the Royal Dublin Society as they are in the service of the Museum; and certain of the porters, who are in attendance on those professors, are also as much engaged in the service of the Royal Dublin Society as in ours; so that, properly speaking, from our vote there should be taken off half the salaries of the professors, and of the porters. There should thus be taken off the 550 *l.* charged against us for building and repairs; and there should be taken off the 500 *l.* for the provincial lectures, and our net expenditure, by that means, would be reduced to, I think, something about 3,000 *l.*

1342.* The whole of your expenses appear in one estimate, whereas the expenses for other institutions (for instance, the Royal Dublin Society) are in two estimates; one under the Department of Science and Art, and the other under the Board of Works?—Yes.

1343. Which naturally gives the appearance

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to your Institution of getting more money, and to the other of getting considerably less?—Yes; but I should not at all wish to be taken as meaning that the Royal Dublin Society gets more than it ought.

1344. Have you any idea why that arrangement has been made?—I do not know. I have never interfered in the matter. I never applied to have it altered; and it has never become a matter of any importance.

1345. Has that been always the case?—Since 1847.

1346. Will you inform the Committee what is the nature of the education that is given in the Museum of Irish Industry?—With regard to our system of education, we have two systems at the same time in operation: one of popular lectures, and the other of what we call systematic lectures. The popular lectures are formally considered to be under the management of the committee of lectures, but the committee of lectures never, as far as the Museum is concerned, interfere in the matter. At the termination of each session, about June, the professors meet, and consider the arrangements they will propose for the coming session, and they draw up a programme, which is forwarded for approval to the committee of lectures, and also to the council of the Royal Dublin Society for their information. It is then sent over to London here, to be approved by the heads of the department. That programme includes two classes of lectures, viz., popular lectures open to the public, and systematic lectures to be attended by students who will pay a small fee. The number of public lectures delivered by each professor is about 24, and the total number of lectures he is bound to give, under the terms of his appointment, is about 54 or 52, so that the number of lectures that can be given to the class of *bonâ fide* students is only about 30. We find that that is insufficient, and I should be desirous, if the system is still continued, of modifying that in such a way as to reduce the number of the merely public and popular lectures, and increase the number of the systematic lectures for *bonâ fide* students.

1347. You think that the course of scientific teaching is interfered with by the number of popular lectures?—I think it is, very seriously.

1348. There are three classes of lectures delivered, are there not?—Yes; there may be considered to be three, because some of those lectures are delivered in the evening. The evening lectures are all public; the public lectures may, therefore, be divided into day and evening lectures; that makes three classes of lectures, which complicates the arrangements still more.

1349. There is a distinction, is there not, as to the nature of lectures that are given at the Royal Dublin Society and those that are given at the Museum of Irish Industry?—The lectures given at the Royal Dublin Society being all public and attended by the middle classes, the professor feels himself obliged to popularise his lecture to render it experimental and brilliant, I may say, to a degree that rather interferes with its being made use of as a means of instruction of students. I do not mean to say that there is not a good deal of instruction given in those lectures, but still they are not arranged in the way that is necessary for the instruction of students thoroughly in the subject. In a course of lectures for the benefit of the class of real students, you must begin at the beginning, and you must go step by step, so that every student can follow you up to the more difficult and complex problems towards the end of the course; but if you wish to have a popular course, you must throw that overboard, and you must take subjects that will present themselves in the most attractive and popular aspects.

1350. The Committee are to understand from you that the lectures given at the Royal Dublin Society are, to a certain extent, introductory; and those which are given at the Museum of Irish Industry are the more advanced course?—We have endeavoured to carry out that arrangement in order to save time; the number of systematic lectures being reduced to 30; by there being so many public ones, we are obliged to try to dovetail one course in with the other, and to make the public lectures introductory to the later ones. The professors do that as well as they can, but still the nature of the arrangements prevents its being perfectly done.

1351. Are not the classes who attend the evening lectures, and the classes who attend the morning lectures, different?—Yes; the classes who attend the evening lectures are for the most part people of the artizan class; of course, with a certain intermixture of persons of the middle class who will go to the trouble of going out in the evening.

1352. Does not it come to this, that you have one class listening to the introductory lectures, and another class listening to the extended course?—To some extent the instruction is disjointed in that way; you cannot be certain of the continuity of your class on the one hand, and you cannot, on the other hand, secure that you can make the subject continuous.

1353. Do the professors very much object to this arrangement?—Yes; but it was forced upon them by the nature of the compromise which was made between the heads of the department and the Royal Dublin Society.

1354. The bad effects of that compromise are now quoted as affecting the utility of the Museum of Irish Industry?—Yes; all the evil results that have flown from, I may say, the imperfect arrangements of the Government itself, are now made a matter of accusation against the Museum.

1355. Have you considered that compromise to be a binding and permanent compromise, or have you only looked upon it as a provisional arrangement?—I have never considered it as more than provisional; it was, in fact, avowed at the time Mr. Cardwell sanctioned that compromise, that it was only a provisional arrangement.

1356. You do not, I presume, attach very much importance to the committee of lectures as regards Dublin?—They never interfere with the lectures; there never has been a case of their even making a remark upon the programme we sent in. So far as Dublin is concerned, they have never interfered. I have the honour of being a member of that committee myself, and they have never thrown any difficulty in our way. On the other hand, we have never felt the necessity of their existence as regards us.

1357. I presume you would have an extended day course of lectures for *bonâ fide* students, and you would charge them something in the way of fees for that, would you?—Yes; if the idea I have formed of the matter were to be realised, the public courses would be limited to the evening, when they could be attended by the artizan classes. The public courses in the evening would then serve as the provincial lectures serve through the

the country, to show the advantages of scientific education, and to stimulate the artisan classes into a desire for acquiring more knowledge; and I would expect that they should then be likely to take advantage of the science schools, if formed, as I hope they will be formed in Dublin, under the minute of the department. I should think that the public lectures that would be delivered in the evening, having special reference to some one art or trade from time to time, would usefully serve as a preparative for the foundation of science schools.

1358. And while you were preparing the minds of the people for scientific education by the evening lectures, you would be providing, to a certain extent, teachers for them, by the morning systematic course?—Yes.

1359. What means have you of ascertaining the results of the lectures you have hitherto given; have you examinations at which prizes are given?—We hold examinations at the end of each course, and we give prizes to a certain extent. The means at our disposal for prizes are exceedingly limited; we have but 50 *l.* available for prizes, whilst at Jermyn-street they have 455 *l.*, I believe, in their last estimate. The answering at the examinations is exceedingly creditable; the standard of examination is high, and the answering is remarkably creditable under the circumstances, considering the short time the students have to prepare. I beg to submit to the Committee copies of the examination papers employed for the last Session. (Vide *Appendix*).

1360. What is the difference between the number of registered students at this present moment of the Museum of Irish Industry and of those at Jermyn-street?—Our total number of students attending any classes in the last year was 241; but then some of those are attending perhaps two or three of the classes. I find that in 1862, the number of registered paying students in the Museum of Irish Industry was 167, while the number at Jermyn-street was 140; in 1863-4, the number in our museum was 241, while the number at Jermyn-street was 187; so that in the last year the number was about 54 over Jermyn-street, and in the year before it was 27 over Jermyn-street. I have to mention, that it appears by a return which I beg leave to submit to the Committee, that the gross number of students attending all the separate classes, was, in 1857-58 (which was the time when we could consider the matter really at work after the new arrangement), 159; it is now 241: so that there has been a very considerable and steadily progressive increase.

1361. Besides the lectures, of which you have given the Committee a description, there is also instruction given in the laboratory, is there not?—Yes. Mr. Galloway, the chemist of the museum, conducts two classes of practical chemistry students, a day class and an evening class.

1362. Are the evening classes instructed in practical chemistry as well as the day classes?—They are.

1363. He has availed himself of the assistance of the senior students in carrying on analyses of metallic ores in the laboratory, has he not?—Yes; very largely. A very extensive series of investigations have been made by Professor Galloway, in concert with the senior students of his class, the results of which have been published from time to time in scientific journals, and which also we make use of in the illustrative labelling of the specimens of the museum. For instance, our object is, and we have carried it out to a great extent, that every specimen of ore and of fuel, and objects of that kind, exhibited in the museum should have its composition given on the label; and, therefore, Professor Galloway has those specimens successively analysed by means of the senior students.

1364. Has that course so adopted by Professor Galloway been attended with good results?—Very good. I never knew a set of chemical students make more progress within the time than they have made.

1365. Are the laboratory students increasing?—They have been increasing progressively every year. The first year that Professor Galloway was at work his number of students was 15, and in the last year his number of students was 74; so that in the eight years during which Professor Galloway has been teacher of practical chemistry his number of students has increased from 15 to 74.

1366. Mr. *Waldron.*] In what year was it 15?—In 1856–7 he began teaching; he had then 15.

1367. *Chairman.*] The lectures on chemistry in the Museum of Irish Industry include the principles of crystallography, of mineralogy, the process of smelting, and so on?—To a great extent they do; our total number of lectures available for that course being only thirty, it is absolutely necessary for the Professor to condense his lectures as much as possible, and he therefore cannot enter into any one subject with the detail with which it could be entered into in a special course on that one subject, but the principles of crystallography and mineralogy, and the principles of metallurgy are included in the course of instruction given by Professor Sullivan, while practical metallurgy, comprising assaying of every description, is gone into by Professor Galloway, who makes the students analyse and assay the various ores of copper, lead, silver, and so on.

1368. In fact, all that Mr. Scott described to us the other day as having been done in his course is really done in the Museum of Irish Industry?—Essentially it is, but with this difference; if Mr. Scott, or Professor Sullivan, or Professor Galloway laid himself out to deliver a course of 12 lectures upon one special subject, he would of course go into a vast deal more detail than he could in a general course, in which metallurgy should be included as a part, but essentially it may be said that the elements of mineralogy, crystallography, and metallurgy, are included in the chemical instruction now given in the Museum of Irish Industry.

1369. Considerable stress has been laid upon the fact, that the apparatus and the specimens of the Royal Dublin Society are used at both institutions; do you attach much value to the apparatus of the Royal Dublin Society?—It should be rather said that the apparatus of the Museum of Irish Industry is used in both institutions, than that the apparatus of the Royal Dublin Society is so used. Most of the apparatus of the Royal Dublin Society was procured while I was their Professor; it was very good at its time, but that, I suppose, is 20 years ago, and all the purchases of apparatus have been made since by the Museum of Irish Industry. I dare say our collection of apparatus now is worth very little short of 1,000 *l.*; it is all available for the lectures at the Royal Dublin Society just as much as at the Museum of Irish Industry; but I would consider it of

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very great importance that the apparatus should not be carried backwards and forwards as it is now, as it thereby causes much trouble and is liable to very serious injury. It should be all in one place; the lectures should be given in one place, certainly.

1370. Supposing that the retaining of the Museum of Irish Industry should be resolved upon by the Government, are there any suggestions you would make to the Committee with regard to rendering it more efficient?—I should certainly wish that the day lectures should be entirely reserved for the class of *bonâ fide* students. At present, though we do our best to carry out the system of real technical instruction, we have neither the time nor the appliances for it; we are obliged as I mentioned to sacrifice more to mere popularity than is desirable. I think we should have the day lectures simply for *bonâ fide* students, and we should have the evening lectures for the artisan classes. With regard to the locality of those lectures, I think it would be very desirable that each professor, in place of lecturing at one time in one place and at another time in another place, should lecture always in the same place, and that his appliances for his lectures should be permanently at his hand; that, for instance, certain of the professors should lecture in the Royal Dublin Society always, and that certain other professors should lecture in the museum theatre always. I think in that way a great deal more efficiency could be given to their lectures than those courses can be now considered to have.

1371. When you say that they should lecture in the Royal Dublin Society, you do not mean under the direction of the committees or the council of the Royal Dublin Society?—No, I have felt and feel very strongly that the Government must make up its mind, and either return to what was, I think, the old condition of the Royal Dublin Society, with merely popular lectures, in which latter case the administration might be very properly vested, as it formerly was, in the Royal Dublin Society, or else, if it is considered desirable to carry on a system of instruction in the industrial arts which would prepare young men for their future careers, enabling them to become useful members of society, I think that then it would be quite impracticable to carry on such a system under a large popular body; I do not think that the function of directing the education of a body of young men, maintaining discipline amongst them, and seeing that the various courses of the professors were properly conceived and efficiently carried out, could possibly be exercised with due responsibility by a body that consists of a large number of people, and is liable to change, both as to opinions and as to individuals.

1372. As regards the staff of the museum, would you assimilate it in any way or extend it to the same scale as that of Jermyn-street?—Yes. If any system of education were to be carried out, the staff would require to be extended at least to the extent it is at Jermyn-street. At Jermyn-street they have two professorships, which we want very much, and have long felt the want of, but under the sort of provisional existence we were in, of course they could not be got. We should have a professor for performing the functions that Professor Willis performs in Jermyn-street, and also a professor acting in a similar capacity to that of Mr. Warrington Smythe. Those are both departments indispensable in a system of education applied to mining and the other industrial arts; and we would also require (as it might be in connexion with the School of Art in the Royal Dublin Society) a master specially for mechanical drawing and descriptive geometry.

1373. Dr. Willis is Professor of Applied Mechanics in Jermyn-street?—Yes; Dr. Barker's chair with us corresponds precisely to the chair that Professor Tyndal occupies in Jermyn-street, that is, Experimental Physics, but not at all embracing the higher applied mechanics, which is not given at all with us, but which is given in Jermyn-street by Professor Willis.

1374. If the educational functions of the Royal Dublin Society were transferred to the Museum of Irish Industry, Mr. Scott, I presume, might occupy the position there which Mr. Warrington Smythe occupies at Jermyn-street?—I have not the honour of knowing Mr. Scott personally, but from all I have heard of him, I should suppose him to be a very competent person for such a position as that.

1375. You made some observations with regard to your disapprobation of a fluctuating body like the Royal Dublin Society having charge of scientific education; you are aware that some alterations are proposed to be made in the constitution of the council, so as to bring the council into direct communication with the Government, and render its decisions on all questions final?—I may be wrong in the impression I have formed with regard to that proposed change, but I do not think it would, in the slightest degree, affect the position of the society as to the question of directing a system of education.

1376. The Commissioners' Report says, the Royal Dublin Society when the constitution is improved, "may be entrusted with the disbursement of grants of Parliament with as much confidence as the trustees of the British Museum;" are you aware whether the trust of the British Museum meets with the general approbation of scientific men in this country?—I could not undertake to say, but I am quite sure that the Royal Dublin Society would administer their trust quite as well as any body at all similar in this country. The functions of the trustees of the British Museum, I would say, are precisely similar to those which I think might be very fairly given to the Royal Dublin Society, that is to say very little more than the conservation of the property. The arrangement of the collections in the museum is in the hands of certain scientific officers; it is a very simple matter, and very little more than detail, and there is no responsibility beyond seeing that nothing is stolen or lost. Everything connected with the museum or exhibition responsibility I should say would be very effectively done by the committees or the council, but when you come to take a young man from his parents, who say to you, "We wish you to prepare him to be a chemist or a metallurgist, or a mining engineer;" you say, "We will prepare him for his future life, we will see that he gets proper instruction, we will see that he turns out at the end of three or four years with a good scientific education, and able to take his place in his profession;" that is a sort of responsibility that a committee of 11 members, or a council of 21, cannot possibly take, because if that young man got bad instruction, and turned out worthless at the end of the time, no one would be responsible; the parents cannot come to a council of 21 and challenge

challenge them about it, nor could the Government dismiss a council of 21.

1377. If great fault is found by scientific men in England to the fluctuating character of the Committees of the British Museum, which is merely an exhibitional institution, would not far greater fault be found with confiding any portion of the educational functions of the country to a similar fluctuating body?—I would put out of the question altogether as impracticable such a body having charge of the scientific education of the country. The education could not go on; it would come to a dead-lock before long. I do not know what shortcomings may have been found in the case of the British Museum Trust; but I should say that a body like the Royal Dublin Society would administer fairly and efficiently the purely exhibitional functions entrusted to them. But the moment you go beyond a few mere popular lectures that would involve no practical responsibility, you could not have education carried on by a fluctuating popular body; you must then have direct personal responsibility; so that, if its efficiency is not carried out even to its smallest ramifications, you can at once put your hand upon the offender, and deal with him. And unless the Government is prepared to carry on education in that spirit, I would say the less they burn their fingers with it the better.

1378. Does not this report recommend that the scientific education of Ireland should, to a large extent, be placed in the hands of the Royal Dublin Society?—That report proposes to abolish scientific education, with the exception of a small residuary fragment, and to place that small residuary fragment in the hands of the Royal Dublin Society under circumstances which would infallibly secure its total inefficiency.

1379. Lord Carlisle takes very great interest, does he not, in the Museum of Irish Industry, and in the annual distribution of prizes?—I have always heard him say so.

1380. He has generally been president on that occasion?—Yes; I think on every occasion since he became Lord Lieutenant.

1381. I may assume than he is very well acquainted with the working of the establishment?—No person in his station more so; and not merely has his Excellency been pleased to preside at our distribution of premiums, but he has on many occasions come to the Museum in the daytime, and examined the collections and satisfied himself as to their condition.

1382. Are you aware that the Lord Lieutenant has stated, through Sir Thomas Larcom, that the amalgamation of the Museum of Irish Industry and the Royal Dublin Society "would be considered, as regards industrial education, to be a reversal of the original intention, and of the policy which has been pursued for the last 30 years in Government education in Ireland?"—I am aware of that statement, and I believe it to be perfectly true.

Lunæ, 9° *die Maii*, 1864.

MEMBERS PRESENT.

Mr. Cogan.
Mr. Dillwyn.
Mr. George.
Mr. Gregory.
Sir Edward Grogan.
Mr. Lefroy.
Sir Colman O'Loghlen.
Major O'Reilly.
Mr. Waldron.
Colonel Luke White.
Mr. Leader.

WILLIAM HENRY GREGORY, Esq., in the Chair.

SIR ROBERT KANE, M.D., F.R.S., called in; and further Examined.

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1383. *Chairman.*] HAS the number of students in the laboratory of the Museum of Irish Industry greatly increased during the last year?—It has increased; in the last year the total number of students in the laboratory was 74.

1384. Is that the largest number of students there has been in the laboratory since the establishment of the museum?—It is; in the preceding year it was 57, in the year preceding that it was 47, in the year preceding that it was 28, in the year preceding that it was 36, in the year before that it was 45, in the year before that it was 39, in the year before that it was 15, and in the year before that it was 11, which was the first year in which practical chemistry was taught.

1385. Have you made any analysis of the grants to the Museum of Irish Industry, as given in the Estimates for 1862-3, showing the amounts taken really for the service of the museum, and the amounts which ought to be charged to other establishments and under other heads?—I have done so; I beg to hand in to the Committee an analysis of the grant to the museum of Irish Industry, as it appears in the Estimates for 1862-3, showing the amounts taken really for the service of the museum, and the amounts which properly belong to other establishments, and which ought to be charged under other heads (*handing in the same.*—Vide *Appendix*).

1386. The total amount of museum vote in the Estimates is 5,062 *l.*?—Yes, of which only 3,007 *l.* 10 *s.* really belong to the museum.

1387. How do you arrive at that result?—In the case of other establishments belonging to the public, where the property is vested in the Board of Works, the rents and taxes, and expenses of the buildings are brought forward under the Board of Works estimates, and do not appear in the estimates taken for the actual objects of those establishments. That amounts in the case of the Museum of Irish Industry to 803 *l.* 6 *s.* Then our lecture system is carried on for the common benefit of the Museum of Irish Industry, and the Royal Dublin Society, and partly under the committee of lectures; consequently the estimate of expense for that department ought to be distributed between the establishments for whose benefit it is taken, and one half of that being removed from the estimate of the Museum of Irish Industry would be the sum of 602 *l.* The lectures being in common with the Royal Dublin Society, that body should pay half the salaries of the five professors. There are three lecturers at 200 *l.*, and two at 100 *l.*, that is 800 *l.*, of which I take 400 *l.* as properly chargeable to the Royal Dublin Society. Then, amongst the porters, there is one porter entirely, and another porter partially, in attendance upon those professors at the Royal Dublin Society, whose wages amount to 52 *l.*; then half the vote for outfit and illustration for lectures, which is 300 *l.*, viz., 150 *l.*, should similarly be charged to the Royal Dublin Society, if it was entirely independent; the total of those being the sum of 602 *l.* Then the vote for the provincial lectures, with which the Museum of Irish Industry has nothing to do, is 500 *l.*; then there are books and other expenses arising from the connexion of the museum with the geological survey, which should otherwise be defrayed from the vote taken for the geological survey, and the lowest estimate that can be made for that is 150 *l.* The sum of those items leaves the net amount, which is taken for actual museum services, at 3,007 *l.*, accounting for the total amount of museum vote in the Estimates of 5,062 *l.* 16 *s.*

1388. Mr. Peel in the Treasury Minute of the 20th April 1863, states, "that the amalgamation proposed by the Commissioners of 1862, would involve a considerable saving of public money in the substitution of one institution for the two, which at present cost the public about 12,000 *l.* a year." Have you made any calculation of the financial result of the proposed change in the relations of the Royal Dublin Society and the Museum of Irish Industry?—I am convinced there would be no money saving whatever in the matter; at least not for a very considerable time, until the existing officers of the institution died off. I have prepared a comparative estimate of the financial results of the changes in the relations of the Royal Dublin Society and the Museum of Irish Industry proposed by the Treasury Commissioners, and the result at which I have arrived is the following:—The present expenditure to be saved by the new arrangements consists in, first, the salaries of officers that are to be abolished. There is the director, 400 *l.*; the chemist, 200 *l.*; the curator, 200 *l.*; the professor of physics, 200 *l.*; the professor of chemistry, 200 *l.*; the professor

professor of zoology, 100 *l.*, and the clerk and accountant, whose salary is at present 160 *l.* Then there are the incidental laboratory charges, 100 *l.*, and sundry miscellaneous expenses, which, at the outside, could not go beyond 200 *l.*, making a total amount of savings of 1,760 *l.* The new expenditure which would necessarily be incurred under the arrangement proposed, would be, in the first instance, the retiring allowances to all the officers whose offices are abolished; and the Commissioners specially recommend that those officers should be treated in a liberal spirit. I therefore have taken their retiring allowances at three-fourths of their salaries, which I believe is an ordinary rate of compensation in the case of the abolition of an office. Putting those at three-fourths of the existing salaries, and then considering that under such an arrangement it would be impossible to continue taking from Dr. Scouler the proportion of his salary, but that Mr. Scott, if he continued as professor of mineralogy, and at the same time curator of the Mineralogical Museum, certainly should have his full salary given to him, without trenching upon Dr. Scouler's means, that would be 200 *l.* for Mr. Scott's salary. Then with regard to the professor of botany, there is this peculiarity; the salary of the professor of botany is 200 *l.* a year, but it was the wish of the heads of the department that there should be some lectures on zoology also given. Professor Harvey did not wish to go to the trouble himself of giving those lectures on zoology, as his were particularly devoted to botany, and he therefore consented to an arrangement by which he gave up half of his salary to a gentleman who was appointed professor of zoology. But Dr. Harvey would certainly very properly expect a restoration of that salary which actually belongs to him; he could not, without injustice, be continued on 100 *l.*, when the giving up of the second 100 *l.* was his own free choice, and only for a special provisional purpose. If the authorities do not wish the lectures on zoology given, of course the professorship falls back into its original position, and Dr. Harvey gets his 200 *l.* like any other professor. The Commissioners recommend an increase in the salary of the professor of agriculture of 50 *l.*; and it will be found that the director of the Museum of the Royal Dublin Society considers that, under the new arrangements, it would be indispensable for him to have two assistant curators in the museum. I would charge one of those as inevitably arising from the new arrangement. The Commission recommend, also, that the laboratory expenses of the professor of chemistry under the new arrangement should be properly compensated for, which would take 100 *l.* And when the increased duties arising from the amalgamation and consolidation of the institutions are thrown upon the administrative officers of the Royal Dublin Society, it would be, of course, only proper that their salaries should be increased in a corresponding way. There are letters as appendices to the Report of the Commission from the Registrar, and from the Secretary of the Royal Dublin Society, pressing very properly and very satisfactorily the insufficiency of their present remuneration, and the necessity for increasing it, if the new arrangements are carried out. Looking to the number of the officers, it is a very low estimate to assume an increase in that administrative expenditure of 300 *l.* I believe that every one of those items is calculated at the lowest rate that would be practicable consistently with justice to the parties concerned; and that makes the new expenditure which is to be incurred, 1,920 *l.*, whereas the saving would be 1,760 *l.* The result, therefore, is, that there would be an absolute increase of expenditure of 160 *l.*; and I have not in preparing that estimate, at all taken into account the necessity for the erection of any additional buildings. (*The Witness handed in the statement.*—(Vide *Appendix.*)

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1389. Additional buildings would be necessary, would they not?—I believe the building which has been erected for the accommodation of the Royal Dublin Society's Museum is certainly not more than what is absolutely required for the collections they already possess. There are some collections in the Museum of Irish Industry which we have always intended to hand over to the Royal Dublin Society as soon as their museum is ready for their reception; viz., the collections of birds and fishes that we have, which were formed by Colonel Portlock during the original survey of Ireland. Those we have only considered ourselves as accommodating, till the Royal Dublin Society were ready to take them. Those would require a certain space. The collections of natural history and minerals which the Royal Dublin Society have are very large, and would require very great space; the agricultural museum would occupy the whole of the ground-floor story of that new building, so that I should certainly say, that the erection of a totally new set of buildings would be necessary for the accommodation of any collections that would go from the Museum of Irish Industry.

1390. You are not referring at present, I presume, to any accommodation that may be necessary for the special collections of the geological survey, in case those should be removed?—No; I have not taken that into account. I am speaking solely with regard to the technical collections. The accommodation necessary for the geological survey would, of course, be described more accurately by Mr. Jukes than I could pretend to describe it, but I do not believe it could at all be accommodated on the premises of the Royal Dublin Society.

1391. From Mr. Lowe's letter to the Treasury, dated the 26th of May 1863, it appears to be the opinion of the Council of Education, that the geological collections may just as well be exhibited in one Museum as in the other, and that there seems to be no difficulty as to the practicability of their removal to the National Gallery building, which was assigned by Act of Parliament to the Trustees of Marshe's Library?—Of course other persons would be more competent to speak with regard to the accommodation required for the National Gallery than I could be supposed to be, but I believe that that proposal to put Marshe's Library in that building was entirely a mistake from the commencement, and was always entirely opposed to the wishes and ideas of the persons who subscribed the money towards the erection of that building. What we subscribed the money for, and what we transferred it in a certain degree to the Trustees of the National Gallery for, was the accommodation of a National Gallery, which should be a memorial of the Exhibition of 1853 in Dublin; but we certainly never contemplated, when we were subscribing that money, the reception either of Marshe's Library or the Geological Survey there.

1392. Do you admit the truth of the assertion

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in the Treasury Minute of the 20th of April 1863, that the National Gallery building has been erected at the public expense?—Not at all; that is incorrect, at least, as given absolutely there. A certain sum of public money has been voted in aid to supplement the sum of money raised by subscription. I had the honour of acting as honorary secretary, in conjunction with Mr. Alexander Boyle, to the committee which raised that fund; and we handed over 5,000*l.* in cash to the Trustees of the National Gallery for the purpose of that building, and that was supplemented in the first instance, I believe, by 2,500*l.* from the Government, and by a further advance afterwards, as a more expensive character was given to the building than was first intended, in order to make it harmonise fully with the building for the museum that had been erected on the opposite side of the lawn; but it cannot at all be considered as having been built at the public expense in the way in which it is described in the Treasury Minute.

1393. Sir *Colman O'Loghlen.*] Do you know how much the building cost?—I do not recollect the exact sum.

1394. *Chairman.*] You do not admit, I presume, that the Government has a right to apply that building to any purposes to which they please to apply it?—I would say, certainly not, without the consent of the parties who subscribed the money, and who certainly must be considered in the light of joint owners.

1395. Sir *Colman O'Loghlen.*] There being an Act of Parliament regulating how the building is to be applied, it could not without the repeal of that Act of Parliament be applied to any other purpose?—No.

1396. *Chairman.*] You stated in one of your former answers that Lord Lincoln originally designed the Museum of Irish Industry to be a national Irish school of chemistry and science applied to the arts; have you any document with you upon which you rest that assertion?—In the original letter addressed to me by Lord Lincoln, founding the Museum of Economic Geology, as it was then termed, there is this paragraph, which I will beg to quote: "It is needless for me, I feel assured, to enter into any minute specification of your duties. The application of such a collection as it is hoped may be eventually formed to the varied purposes of mining, of agriculture, and of the arts will present a field for analysis and illustration, the resources of which it will, of course, be your chief duty to explore, and ultimately to place before the public in such an intelligible and popular form as shall best accord with the objects of such an institution."

1397. I presume you gather from that letter of Lord Lincoln, that it was not originally intended to confine the Museum of Irish Industry to a museum of economic geology?—The title of the museum was then that of "Economic Geology," but, certainly in all my communications with Lord Lincoln, I always understood from him that its object was the exploration and illustration of all the resources of Ireland, that might be made the basis of the introduction or development of industry in its general application.

1398. Mr. *Waldron.*] What is the date of that letter?—March 29th, 1845.

1399. *Chairman.*] Is the impression you derived from that letter corroborated by the Minute of the Department of Science and Art of the 11th of April 1854?—Dr. Playfair's letter on the part of the Board of Trade, defining the position of the Royal Dublin Society and the Museum of Irish Industry, expressly states that it was intended to supply industrial education for the classes that would wish in Ireland to pursue any kind of industrial career. It says: "My Lords thereupon determine the limits of the Museum of Irish Industry, and direct that its collections shall in future be confined to the illustrations required by a Technological Museum, having reference to the industrial arts and to such collections as may arise during the progress of the Geological Survey with which it is connected." Then further on, in that letter, is this passage: "My Lords, in bringing the Educational Votes hitherto taken by the Royal Dublin Society in connexion with the scheme for industrial education entrusted by Parliament to the Board of Trade, will give to them greatly increased efficiency, and make them bear more directly on the instruction of the working classes of Ireland, as well as on the technical education of those who intend to prosecute occupations connected with the industrial arts." That distinctly indicates the formation of a regular course of education for persons connected with the industrial arts, and, necessarily, the organisation of a school of industry.

1400. I presume you have read the letter of Mr. Lowe of the 26th of May 1863?—I have.

1401. Are you of opinion that if the views of the Committee of Council on Education were carried out, they would virtually do away with any advanced course of scientific education in Ireland, leaving the schools under the Science and Art Minute to provide the merest elementary instruction?—Yes. If the views they appear to put forward in this correspondence were carried out, they would abolish everything in regard to superior scientific instruction in Ireland outside the universities. They would abolish everything except the schools under the Science and Art Minute, and those schools can never be more than very elementary schools, calculated for the artisan classes merely.

1402. That would be the case if you transferred the chairs of mineralogy and geology to the Royal Dublin Society, and if you did away with the operations of the Committee of Lectures?—I think any lectures delivered in the Royal Dublin Society must necessarily be of a merely popular and general character. The Society itself would, I should imagine, think that they were travelling out of their functions if they attempted anything more. Under such a system there could, therefore, be no proper industrial education given, and no possibility of doing what I believe to be a very important matter, namely, preparing masters, who would subsequently become the managers of the schools under the Science and Art Minute. In Jermyn-street they have lately superadded a most valuable function to their education there, by the institution of a system of lectures specially intended for the training of persons who intend to become certificated teachers, and I understand that the establishment of that system has been attended with highly useful results. Such has also been done (of course, on a smaller scale) already in the Museum of Irish Industry: persons have been trained in the museum who have since become masters, and the results of the examination of their pupils have been of a very surprising character. The results obtained in the few Science Schools which we have in Ireland have been far beyond the average of the results obtained

tained here. I would consider it a very great loss to the country if the system that has already borne such fruit, and which promises to bear still more, were in any way interfered with.

1403. It would be virtually reducing Dublin to the position of a provincial town, would it not, if we had to look to London for certificated scientific teachers?—It would even do much worse; because, after all, the interposition of the Channel makes the break in the communication far beyond what the mere geographical distance would seem to indicate. For instance, if you take Newcastle, or a town in the North of England, really as far off as Dublin, the directness of its communication with London, and its identification with London, are far greater than you can ever have in the case of a separate island with the sea interposed, which will always be a great obstacle to the communication; and, besides, I think there would be nothing gained by it. I think, both for the public service and for the sake of economy, the thing can be very much better done by allowing a separate centre to a certain extent to exist in Dublin, of course under proper control. But the attempt to centralize everything in London is, I think, both politically and financially, a very serious mistake. The moral effect of it is very bad; and I think, in a money point of view, there is by no means any saving. In Mr. Lowe's letter there is a remark that anybody who would be disposed to get industrial education in Dublin could readily come over and get it in London. Any person who really knows the circumstances of the classes that apply themselves to industrial pursuits, and knows the relative expense of living and so on, would, of course, see that there is not the slightest foundation for such a statement as that.

1404. I think you have already stated that you attach much value to the continuance of the provincial lectures?—I believe them to be extremely useful. I believe that they are the means of diffusing through the country at large a taste for the appreciation of scientific studies that is highly valuable, tending to give the young men in the country towns something else to think of than drilling and marching, and tending to turn their attention to employment which would be really productive of benefit to the country and to themselves.

1405. Would the general science system be sufficient of itself without the lectures?—If the country was already in such an advanced condition, and the supply of masters so abundant that the science system, as established in this country, could be applied to Ireland, very possibly satisfactory results might flow from it; but that is not the condition of Ireland at this moment, nor can it be for a long time.

1406. Do you agree with Mr. Lowe that the general science system may be worked to any standard of acquirement thought desirable, by simply raising the standard of examination, and augmenting the fees to the teacher sufficiently to make it remunerative?—No; that is a total fallacy. You never can bring the acquirements of a class of students beyond the level of its master. Individual students may go beyond the level of their master, but you can never bring the acquirements of the class beyond the level of the acquirements of the individual teaching them; so that no amount of severity of examination, and no amount of money given in prizes, could possibly bring the class to any higher standard than that fixed by the acquirements of the individual who is their teacher. The way to raise the standard of education in the class is to raise the standard of capability of the teacher; and there is no provision for doing that in the arrangements of the Science and Art Department as regards Ireland.

1407. In regard to the expenditure of the annual grant for the purchase of specimens, and so on, what is the amount of the annual grant?—£. 400.

1408. I see, in referring to the Report of 1857, the cost of the specimens purchased and added to the Museum of Irish Industry, from the 1st of January to the 31st of December 1857, amounts to 312 *l.* 3 *s.* 11 *d.*, and I find that there is a difference between the sum of money actually expended and the amount annually voted; how do you account for that?—The reason for that is that the list printed annually in our Report contains only the specimens and models purchased; it does not contain the books. The grant of the 400 *l.* is both for museum purchases and for library purchases.

1409. Is any portion of that 400 *l.* diverted to any purpose whatever except that for which Parliament has voted it?—No, none whatever; moreover, the Report to the Science and Art Department is made for the calendar year, from the 1st of January to the 31st of December, while the vote is taken for the financial year, from the 1st of April to the 31st of March; therefore the expenditure as returned on the 31st of March might be very materially different from the expenditure as returned to the 31st of December. I have, in this Return, reduced the expenditure, both for books and specimens for the museum, to the same standard from the 1st of January to the 31st of December, and that shows that the total amount is rather more than the annual grant of 400 *l.*—(*The Witness handed in the Return. Vide Appendix*).

1410. It appears that on the average, for the last six years, you have spent a little more than the 400 *l.*, viz. 413 *l.*?—Yes. In the case of purchases of models and specimens, and so on, it is impossible to bring the thing within an absolutely strict limit, but we obtain the permission of the Department for any excess. I will hand in a Return of the mode of expenditure of the 400 *l.*, in which the museum purchases are reduced to the fullest detail. That return is for 10 years, from the 1st of April to the 31st of March in each year.—(*The Witness handed in the following Statement. Vide Appendix.*)

1410.* Sir *Edward Grogan.*] Have you a general balance-sheet of the income and expenditure for the last year?—I have a Return of the expenditure, under the various heads, for the last 10 years (*handing in the same. Vide Appendix*).

1411. *Chairman.*] The Museum of Irish Industry is larger in its scope than the Museum in Jermyn-street, is it not?—With the approval of Lord Carlisle, when Chief Commissioner of Works, its name was changed and its objects extended. We have endeavoured to embrace, to a certain extent, the illustration of objects of the animal and vegetable kingdoms having relation to industry, in addition to those of the mineral kingdom, which alone are exhibited in Jermyn-street. We have, in fact, endeavoured to do (of course on a small scale) what is partly done at Kensington by two very important museums, which they have, one of which they call their

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Food Museum, and another which they term their Museum of Animal Products. We, though not following precisely the same plan, endeavour to illustrate the application of animal and vegetable products in the industrial arts; and that of course brings us to a somewhat more extended scope than is embraced by the Jermyn-street Museum.

1412. Therefore, you are doing nothing more for Ireland, I presume, than what the Jermyn-street and Kensington Museum are doing for England?—We do not at all trench upon the question of art; but we endeavour to combine the scientific element of the Kensington Museum with the scientific element of the Jermyn-street Museum, as there is not any other place in Dublin where the same thing is done.

1413. There has been a communication forwarded to me on the part of certain students of the Museum of Irish Industry, in which they state, that "for the first two or three sessions full courses of lectures were given in each branch of the sciences, both in the day time and in the evening, and the latter were very fully attended, and many students passed the examinations with great credit, surpassing in many instances those of the day courses. A change in the arrangements was then made by the committee of lectures in Dublin Castle, which is composed in part of members of the Royal Dublin Society; the evening lectures were much curtailed until finally they lost their systematic character, and, in one case, a course that was paid for by students was not given at all." How far do you corroborate that statement?—I do not think that can be strictly correct. With regard to what may have been done under the direction of the committee of lectures, that I would not be officially responsible for; but I have not been able to find any evidence of there having been a larger amount of instruction given in the earlier years of the operation of the system, than there is at the present day. I think the number of lectures delivered is as large as it was. There is one little point which perhaps may have led to that statement, which is that, at the commencement of the system, there were more of the free and popular lectures delivered in the museum than there now are: latterly, for some years back, there has been a larger proportion delivered in the Royal Dublin Society. I considered, and my colleagues completely agreed with me, that everything that could tend to conciliate the Royal Dublin Society and to fall in with their views should be done; it was our duty to carry out and to keep everything running as smoothly as possible, and therefore we have not been so particular of late years as to having the public lectures given in the museum, the great majority of them being delivered in the Royal Dublin Society. If, therefore, those gentlemen refer to what is done in the Museum of Irish Industry, it is very possible that they may be verbally right; but as to the actual amount of lectures given, there is no foundation for that statement.

1414. The complaint seems to be that the lectures have lost their systematic character?—The only systematic course given in the evening, is given in the Royal Dublin Society by Dr. Barker. I do not think that there could be any real foundation for such a statement as that.

1415. They say, "the result was that the attendance of the students, both in the day time and in the evening, rapidly fell off; and the examinations became so bad, that candidates of sufficient merit could not be found to take prizes, which before had been eagerly contested for?—There is not the slightest foundation for that; the competition for prizes has been as large lately as it ever has been. I have a return here, which will show that (*handing it in*)—(*Vide Appendix*). This return contains the number of persons competing for prizes in the various classes, and their attendance; and I think it will be found that, in the later years, there has been quite as much competition as before, and the prizes are only awarded upon answering of a very high character. If we take any year at random, such as 1858–59, we find in zoology, five persons competed; in geology, 11 persons competed; in physical science, nine persons competed; in general chemistry, nine persons competed; in botany, five persons competed; in practical chemistry, six persons competed. If we take last year, (for the examinations of this year are not yet got over), we find in geology, that 18 persons competed; in chemistry, 10 persons competed; in physical science, nine persons competed; in geology, 11 persons competed; in botany, nine persons competed; and in practical chemistry, 13 persons competed. In the year 1858–59, the total number of persons who competed for prizes was 45, and in 1862–63, the total number of persons who competed for prizes, was 60; and I think that if we compared every year, the same general result would be obtained, that the number of persons competing for prizes has certainly not diminished, but that it has year by year increased.

1416. I presume your opinion is by no means hostile to the continuance of the Royal Dublin Society?—On the contrary, I would esteem it a great misfortune to the country if the Royal Dublin Society were at all interfered with in the performance of its functions; I believe it to have done, and that it is competent to continue to do, a vast service to the country.

1417. You would admit, I presume, that it should be liberally supported by Parliament, to enable it to carry out those peculiar functions which you would wish to attribute to it?—Certainly: I believe it to be the duty of Parliament to supply it with ample funds for the administration of its botanical garden, its museum, its agricultural and other exhibitions, and for the maintenance of its library. I see for similar objects in this country the most profuse expenditure is not grudged. The maintenance of the gardens at Kew, and the museum attached to those gardens; the maintenance of the museum at South Kensington, on a scale not more liberal than it ought to be, but still extremely liberal; the maintenance of the Jermyn-street Museum in the condition of ample efficiency in which it is, are all of them very proper expenditures; but, certainly, for a country constituted like Ireland, and holding the peculiar position in relation to the empire that Ireland does, I think a very liberal expenditure for such objects would be highly politic and only fair, and I believe that the expenditure of liberal sums for those purposes could be most wisely and properly committed to the charge of the Royal Dublin Society.

1418. Do you believe that the efficiency and the popularity of the Royal Dublin Society would be impaired if it were deprived of its educational functions, and restricted solely to exhibitional ones?—I do not think it would. In the first place,

place, outside the parties who would be really engaged in the administration of these matters and would be responsible for them, I do not see that anybody would be much affected; for instance, under the sort of arrangement that has passed through my mind in considering the matter, there would be quite as much lecturing going on, and quite as much education work really done in the Royal Dublin Society as at the present moment, and probably more.

1419. You would, in fact, I presume, have the lectures delivered in the theatre of the Royal Dublin Society upon all subjects illustrated by the collections within the walls of that society?—Yes; I should say, all the lectures on natural history, both zoology and botany, would be delivered on the premises of the Royal Dublin Society. The lectures of Dr. Barker on natural philosophy, which is an extremely popular course, could be very well delivered in the Royal Dublin Society, and the collection of philosophical apparatus might be accommodated there. There are, perhaps, other lectures that might be delivered there. Then the lectures upon general chemistry, by Dr. Sullivan; and upon geology, by Mr. Jukes, might be delivered altogether in the museum. By that means, what has been sometimes improperly called here a double staff of professors, and the same professors lecturing in two places, would be got entirely rid of.

1420. Mr. *Lefroy.*] Has your attention been called to the difference of opinion expressed by Dr. Lloyd and Dr. Corrigan, as to the Dublin Society being a fit fountain-head for all instruction on scientific subjects in Dublin?—I cannot call to mind the exact amount of difference there was between the two; I rather think they looked at the same matter from different points of view; it was not so much that they differed with regard to any one definite thing, but their point of view was different.

1421. Dr. Corrigan said that he did not think, from its popular constitution, the Royal Dublin Society was so well fitted for the direction of scientific instruction as another institution might be. Dr. Lloyd, on the contrary, said he did not think that there was any great objection to the Dublin Society fulfilling those functions; which of those opinions would you agree with?—I think each would be found to be pretty correct in their own point of view. Dr. Lloyd, I believe, at the time was referring to the continuance of the delivery of the popular lectures in the Royal Dublin Society; and I would entirely agree with Dr. Lloyd, that if it were proposed not to go beyond the delivery of courses of popular lectures, from time to time, such a function could be very effectually and satisfactorily conducted by the Royal Dublin Society. Dr. Corrigan, when he answered that question, was looking forward to the establishment of a systematic school of industrial science, for the direction of which the constitution of the Royal Dublin Society, in his opinion, entirely unfitted it. I entirely concur in that view with Dr. Corrigan; and I believe that the complex and popular nature of a body like the Royal Dublin Society, which is regulated by the votes of a large proprietary on the one hand, and which, on the other hand, can only vest its administration in a large council of 21, would render it incapable of directing and organising a system of industrial education.

1422. Then, if you have not taken an accurate view of Dr. Lloyd's opinion, as expressed before this Committee, if Dr. Lloyd thinks the Royal Dublin Society would be a fitting body with whom to entrust the direction of more advanced lectures on scientific subjects, you would not agree with him in his views?—Certainly not.

1423. Dr. Lloyd expressed an opinion, that if the amalgamation did not take place, it would be very important that the professorships of botany, zoology, and mineralogy, should be reserved for the Royal Dublin Society, whilst the physical sciences in their connexion with the arts, he thought, would be better dealt with at the Museum of Irish Industry. Is that your opinion?—Such a state of things would put an end altogether to the existence of anything like a school of industrial science; because to have a school of industrial science, you must have all the professors responsible to a single head, and placed under a certain and definite organisation and control; you could not possibly have a school capable of producing any good effect, and with proper responsibility to the State, if you had some of the professors under the management of the Council of the Royal Dublin Society, and some others of the professors under the management of the Science and Art Department: no person would undertake the responsibility of producing any useful result with such an organisation as that.

1424. Would not that be a reason for the amalgamation of the two societies, in order that there might not be that divided superintendence of those lectures whether they be scientific or otherwise?—It would be better to have any one head, than to have two heads.

1425. Are you an advocate for the amalgamation of the two systems?—I endeavoured to explain, on the last day, the sense in which I used the word "amalgamation." I would certainly say that the amalgamation, if it merely consisted in transferring to the Dublin Society the professors and the collections, and the arrangements of the Museum of Irish Industry as they now exist, could be carried out without any injury, as I believe, to the public service, because as I then said the only difference that there would then be would be the removal of myself; but, at the same time, I endeavoured to explain to the Committee that if it is the object to carry out what was originally proposed by the Board of Trade and the Government, in the year 1854, and what was very definitely and positively promised to Ireland at that time, a scheme of real industrial education, I conceived that that could not possibly be done under the management of the Council of the Royal Dublin Society. I may say, moreover, as the question has been asked me, I think it would inevitably before long be the means of breaking up the Royal Dublin Society, by introducing elements of contention and difference into it which do not now exist, and which might revive some of the most unpleasant conditions and risks to which, in former years, the society was exposed. Everybody knows that in Ireland, unfortunately, the question of education is one that is very bitterly contested, and that it is very difficult to manage anything about it; and, I think, if you threw such an apple of discord into the Royal Dublin Society, as to invest it with the control of a system of education, you would be certainly laying the foundation of very great danger to the society.

1426. Dr. Lloyd contemplated that there should not be amalgamation; and he made the proposition, that supposing no amalgamation to take place, the professorships in botany, zoology, and

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mineralogy, should be confined to the Royal Dublin Society, while the lectures of the other class connected with the arts should be delivered in the Museum of Irish Industry. I put the question to you, whether you agreed in that view; you said you felt there would be an objection and difficulty in that division. Supposing the amalgamation not to take place, what is the plan you would propose so that the two societies should go on usefully and without clashing with each other?—I will state what I think would be the plan which, under those circumstances, should give the most security and the greatest promise of useful results in future. I believe that, in the first instance, it would be well to carry out fully and strictly the conditions that were laid down in the letter of the Board of Trade in 1854. Those conditions were that the Royal Dublin Society should be entirely relieved (which is the expression in the letter of Dr. Playfair, written on the part of Mr. Cardwell) from the superintendence of the educational staff. I believe that that is as indispensable for the popularity and success of the society itself, as it is certainly indispensable to the proper efficiency and success of any educational plan. I think, then, that the whole of the educational system should be placed under the direction of one responsible head, who would both have power to do what was right and be responsible for its being done. I believe, then, that the professorial staff should be placed upon the same footing as at Jermyn-street; it would not be necessary to go beyond what is found so successful in Jermyn-street, but certainly the professorial staff should be put on the same footing with Jermyn-street; then the Royal Dublin Society should be supplied with abundant means for the development of its exhibitional functions, its museums and shows, and for the extension of its library. The Geological Survey, of course, I have nothing to do with; but in such a case the objects of the Museum of Irish Industry would be to supply a *locale* for the delivery, more or less, of lectures, and to supply also a *locale* for those industrial or technicological collections which would illustrate the lectures. As to the delivery of the lectures, I have made an estimate that, by an arrangement by which the Professor of Zoology, the Professor of Botany, and the Professor of Physical Science should lecture in the Royal Dublin Society only, quite as large if not a larger number of lectures would be delivered there than there are at present; and by having popular courses of lectures delivered there in the evening, at a time when the artisan class could attend them, and by each professor delivering a certain number (say 12), a great inducement to scientific study would be given to the artisan class. The only interest that could be at all likely to be interfered with by such an arrangement, would be the privilege which the members of the Royal Dublin Society have at present, to attend all lectures that are delivered in the theatre. I do not see that it would be at all necessary to interfere with that. The character of the day-lectures would be in a slight degree altered, because, in place of being merely popular and flashy, they would be *bonâ fide* systematic lectures for students; but still I am quite sure the members of the Royal Dublin Society would find this system as useful to themselves and to their families as the lectures at present are, and there would be quite as large a number of them delivered: so that I have been unable from any point of view to see how any injury or inconvenience could occur under such a plan, whilst it would have the effect of securing the responsibility which ought to attach to the carrying on of any system of education under the State.

1427. Would you do away with the joint committee of lectures, which appears to be a bond of union between the two societies at present?—I do not myself attach any great importance as to whether that committee exists or not: it was a sort of compromise originally; it was intended in 1854, when the Board of Trade took the matter up, that the administration of that fund for provincial lectures should be transferred along with the other educational functions, but the Royal Dublin Society attached some value to preserving that. A deputation waited upon the Lords of the Treasury here, and they came to a sort of compromise, by which this joint committee was formed; but whether that joint committee should be continued or not, I do not think is a question of any practical importance.

1428. I am right, am I not, in inferring from your evidence that, though you may think that certain scientific lectures would be delivered in the Museum of Irish Industry with more advantage, yet, on the whole, you think the Royal Dublin Society a most valuable and important institution for carrying out its functions, as regards popular lectures, and as regards the encouragement of agriculture?—A valuable institution for all purposes of exhibition, museum, libraries, and shows; I would consider it also highly desirable that fully one-half of the popular systematic lectures that may continue to be given should be delivered upon their premises: in fact, it would be an embarrassment to the Museum of Irish Industry to have to deliver them all there; it would be more convenient to have the two theatres available.

1429. Major *O'Reilly.*] Is it your opinion that the proper functions of the Museum of Irish Industry would be to supply scientific industrial teaching only, and not to have anything to say to general literary education or teaching for the learned professions?—I would not contemplate that the Museum of Irish Industry should, in any way whatsoever, go beyond the limits of industrial education. I would bring that industrial education to the highest development, and the greatest perfection that we could get power and means to bring it to; but, certainly, I would by no means contemplate going outside of that.

1430. Sir *Colman O'Loghlen.*] Is not there a zoological collection in the Museum of Irish Industry?—There is; it is a very peculiar collection, being a collection of Irish birds and fishes; and also a herbarium, and other things collected by the gentlemen under Major General Portlock at the time the survey of Ireland was being carried on, on a very large scale, before 1842.

1431. Supposing the Natural History Museum is kept, as it is proposed to be kept, at the Royal Dublin Society, do you see any reason for keeping a separate Natural History Museum at the Museum of Irish Industry?—No; we have never considered that zoological collection as being more than deposited there until the museum of the Royal Dublin Society is ready for its reception. The museum of the Royal Dublin Society has been left for years incapable of being properly arranged and fitted up for want of funds.

We

We have always proposed that the Portlock Collections should be removed to the Royal Dublin Society as soon as they are in a position to receive them.

1432. You see no objection to those two collections being amalgamated?—On the contrary, we should be glad to get rid of the collection; the space it occupies is required for the purposes of the Geological Survey.

1433. You spoke of a library at the Museum of Irish Industry; is that a purely scientific library?—A purely scientific library.

1434. Is that open to the public or to the students, or is it confined to the professors alone?—It is confined to the professors and students. We were restricted by the orders of the Department of Science and Art to the purchase of books specially required for the purposes of the professors and students, and we have been very careful never to go beyond that; at the same time, the library is now a very valuable one in a scientific point of view, and it might be very desirable to make it more popularly available, but we have never received any instructions to make it so.

1435. Is there space to enable you to make it more popularly available?—The space is limited; it could only be within very narrow limits, but the number of persons who would be at all likely to consult a library of that sort is very small. I am sure we would be able to give accommodation to any person who wanted to refer to those books for *bonâ fide* objects.

1436. Are there any books in your scientific library which are not already in the library of the Royal Dublin Society?—A great number; any book that is really available in the library of the Royal Dublin Society I avoid buying if I can. We must have certain books which are already in the library of the Royal Dublin Society, because the professors, if they are wanting to make continual reference to certain books, cannot always be running to the Royal Dublin Society, or borrowing them from the Royal Dublin Society; therefore, in some cases, we have duplicates.

1437. You see no objection to persons engaged in scientific studies being admitted more freely to the library of the Museum of Irish Industry?—No. I should be glad that any person really a scientific student should have access to them, and some instances have occurred (not many) where persons not students, and having no connexion with the museum, have written to me to ask permission to read in the library for some special object; and in every instance, when I have been satisfied with their respectability, I have given the permission.

1438. Is the Museum of Irish Industry open every weekday?—Yes.

1439. Supposing it were thought desirable to have it open on Sunday, in the same way as the National Gallery is, would there be any objection, as far as the arrangements are concerned, to opening it on Sunday?—I think all those institutions should be open on Sunday; I would do anything I could to draw the people away from the public-houses.

1440. Could arrangements easily be made for opening it on Sunday, supposing that it was deemed advisable to do so?—It would require a small increase of staff; you could not keep the same porters on duty seven days in the week.

1441. Have you made any calculation as to what would be the increased expenditure that would be involved in opening it on Sunday after the hours of Divine Service?—It would certainly be very small. It would only require a couple of additional men; 100 *l.* a year would entirely cover any additional expense on that score.

1442. Sir *Edward Grogan.*] I collect from your evidence that the only qualification you wish to give to that passage of your evidence given before the Commission on the subject of amalgamation, is the interpretation you now put upon the word "amalgamation"?—Yes. In the first instance, the question had reference to whether the public would, by the amalgamation of the two institutions, suffer any loss of anything that now exists or any good that is now done. I think everything that is now done could be done if the two institutions were amalgamated, the sole difference between the new condition of things and the old condition of things being that the council of the Royal Dublin Society would be the directors of the Museum of Irish Industry.

1443. I collected from you that your objection, in fact, was more to the loss which the public might possibly receive under the proposed amalgamation, from any diminution of the educational strength that now exists, than to anything else?—Yes.

1444. You have expressed an opinion, when questioned about what you would suggest should be done, that what is pointed out in Dr. Playfair's letter of 1854 should be literally carried out?—Yes; I think that should be the basis of the best arrangement that could be made.

1445. May I consider that letter as constituting the charter of your institution?—In general terms; of course it did not go into any minute details, but, in general terms, it constituted the basis of the arrangements under which the educational operations of the Museum of Irish Industry were to be conducted.

1446. Those arrangements, proposed in that letter were subsequently modified?—Yes.

1447. What reason have you to separate the original proposition from the proposition as it was ultimately carried out?—I am aware of all the circumstances. After that letter had been received by the Royal Dublin Society, they felt very naturally dissatisfied, and they were anxious to preserve the patronage and the nomination of their professors, and so on; they were anxious to preserve the system of provincial lectures in their own hands, and they had a good deal of negotiation with the Government upon the subject. The Royal Dublin Society is an exceedingly powerful body, and one that it is necessary for every Government to do its best to conciliate and work harmoniously with, and therefore there was a good deal of modification in the actual carrying out of the matter from what had been originally proposed and contemplated in Dr. Playfair's letter.

1448. Do not the arrangements made on the interference of the Royal Dublin Society literally constitute the charter of your institution?—They constitute the plan upon which our operations have hitherto been conducted.

1449. And on which it was intended they should be conducted?—Yes; on which it was arranged they should be conducted after those negotiations had taken place. It was intended, originally, that they should be conducted on a somewhat different manner.

1450. I believe that the scope of the Museum of Irish Industry goes somewhat beyond what

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was originally contemplated when it was established?—In the sense that it was originally established by Lord Lincoln, simply as a Museum of Economic Geology similar to that which now exists in Jermyn-street.

1451. It has gone beyond what was originally contemplated, in its present arrangements?—Yes. I had represented more than once to Lord Lincoln that the objects of industrial education and of industrial investigation, which might be useful to the country, were not by any means limited to purely geological problems, and that therefore it would be of more practical advantage that the museum should take the position of a museum of industry generally. Lord Lincoln found himself rather bound down by the precedent of what had been already established in London; but when Lord Lincoln left the Office of Works, and Lord Morpeth (now Lord Carlisle) succeeded him, I made similar representations to Lord Morpeth, and he entirely agreed with me, and then we proceeded to form the collection of animal and vegetable products which is now contained in the museum. Subsequently the same thing was carried out in this country, particularly after the year 1851, when the Great Exhibition called more interest to the subject; and industrial collections were formed at South Kensington under the management of Dr. Playfair, quite similar in principle, but on a larger scale, to what we had had existing in Dublin since the year 1847.

1452. Is the letter from Lord Lincoln dated the 29th of March 1845 the letter you are referring to?—Yes.

1453. Was there any other official communication upon the subject?—Not strictly official: I corresponded personally with Lord Lincoln upon the subject, but he always said that he felt himself bound by the precedent of what had been established in Craig's Court, where the museum then was, and that he could not undertake to go beyond it.

1454. You stated in your evidence that Lord Lincoln contemplated that the institution should become a great national school of chemistry and science applied to the arts; I do not find any passage to that effect in that letter?—In another letter which I have here (but which was separated from that one by a letter which I did not consider official, it being merely a private remonstrance with Lord Lincoln, and which I would not therefore tender directly in evidence) there are expressions to that effect. I represented to him that the salary named for the office of Director of the Museum of Economic Geology was lower than I had been led to expect, and I remonstrated upon that head; and Lord Lincoln said, in a letter he wrote to me: "I have reason to believe that you are already in possession of appointments not without emolument, and of these it has never been proposed to press upon you the relinquishment; and the laboratory of the museum, I presume, will open to you advantages which attach to all institutions of the kind, connected with the Government, supported at the public expense, and endowed with all the requisites for the establishment of a national school of chemistry." I had that in my mind, but I did not read that passage, it being in a letter which I did not consider official.

1455. What is the date of that letter?—May 13th, 1845. My remonstrance with Lord Lincoln turns upon personal matters, and I did not, of course, consider it to be official; therefore I did not regard his answer to me as being of the same character.

1456. If I understand your evidence rightly, with regard to the future arrangements of the Museum of Irish Industry, supposing its continuance to be decided upon by Parliament, you would recommend that there should be a staff of professors, strictly under the control of the director, whose lectures should be specially directed to the education of the youth of Ireland in purely scientific subjects?—Yes, that is my idea.

1457. The whole of the museum, and all its staff, are under the control and superintendence, generally, of the Department of Science and Art?—Yes.

1458. They do not appear to coincide in your view in that respect, if it be the case, as is supposed, that the Report of the Commission was influenced in a considerable degree by the views of the Department of Science and Art?—I believe that the Department of Science and Art would prefer entirely getting rid of the responsibility of having charge of superior scientific education.

1459. *Chairman.*] In Ireland?—And in this country also, I believe.

1460. Sir *Edward Grogan.*] Your experience of Ireland, however, leads you to believe that scientific education, both popular, as given by the Royal Dublin Society, and of a superior class as given by the Museum of Irish Industry, are desirable to be maintained in the country?—Decidedly. I think it of very great importance to the country that the diffusion of scientific knowledge and the communication of scientific instruction should be carried on in Ireland, both for the artisan classes and the middle classes, who constitute the employers of labour; I think it most indispensable for the prosperity and progress of the country that such should be done.

1461. In answer to a question of Mr. Lefroy, you said that you considered it would be proper to continue certain specified lecturers with the Royal Dublin Society, and that the lectures should be given on the premises of the Royal Dublin Society?—I think that would be quite practicable, and would be desirable; I mean lectures on botany, zoology, and natural philosophy.

1462. *Chairman.*] Did you state that those lectures should be in connexion with the Royal Dublin Society?—No; that they should be under the same responsible supervision with the professors who lectured in the Museum of Irish Industry; there could be no division of responsibility with regard to their direction and control.

1463. Sir *Edward Grogan.*] You have stated that you were apprehensive that if the whole of the lecture system were handed over to the Royal Dublin Society, differences of opinion might arise in that body which might be destructive of it as a popular institution?—I think there might.

1464. You are, of course, aware of the manner in which the provincial lectures and the lectures in Dublin are conducted under a body nominated partly by the Government, and partly by the Royal Dublin Society?—Yes; there is a committee of eight, consisting of four gentlemen named by the Royal Dublin Society, and four named by the Government.

1465. I believe that you are a member of that body?—Yes, I am.

1466. Have any differences of opinion ever arisen

arisen in that body with regard to the nature of the lectures that should be so delivered?—No; nor is it likely there would. The courses of lectures are very short, and the details of the management are placed entirely in Dr. Sidney's hands; he communicates with the Committee, and he is exceedingly efficient; there is no cause of dissatisfaction, and nothing unpleasant has ever occurred with them, nor should I expect that anything could occur, just as I should not anticipate that anything unpleasant would occur in the delivery of lectures under the direction of the council of the Royal Dublin Society; that is to say, short courses of popular public lectures, such as they formerly had under their management. You do not get into that sort of danger which I apprehend until you come to the actual management of a system of education, where you have courses of lectures spreading over a whole session; where you have young men coming from various parts, whom you must watch, whose progress you must endeavour to accelerate, and for whose conduct you must be prepared to take a certain amount of responsibility. As soon as you come to apply to a class like that a real system of education, I would fear that questions might arise that would embarrass the Council of the Royal Dublin Society very much, and might render the position of the society very difficult.

1467. The lectures at present given are under the control of the committee of lectures?—Yes.

1468. You seem not to attach very great weight to the superintendence of that committee, with regard to lectures generally?—In the first instance, with regard to the lectures delivered in Dublin, my colleagues prepare a programme of lectures which they propose to have, and we send a copy of that in to the committee of lectures; who have in every instance approved of it, without question, and no question has ever arisen with them. The matter has been left in the hands of myself and my colleagues. Then with regard to the provincial lectures, owing to the remarkably zealous and efficient services of Dr. Sidney, everything has been kept perfectly smooth there, and nothing has ever occurred in the management of the business of the committee of lectures that could lead to anything unpleasant.

1469. When you state that there is a programme of lectures submitted to the committee of lectures, you mean that that is the species of superintendence and control exercised on the part of the committee of lectures in Dublin?—Yes, as regards the public lectures delivered in Dublin.

1470. And a similar copy is sent over to the Department of Science and Art here?—Yes. As soon as the acquiescence of the committee of lectures is obtained, we forward the whole document to the heads of the Department here, and we do not print it till the approval of the Vice-President of the Committee of Council, whom we regard as our head, is obtained.

1471. May not the absence of changes or alterations being made in that programme by the committee of lectures in Dublin arise from the confidence which the Committee entertain in the thorough conscientiousness in the discharge of their duty by those lecturers?—Yes; but there is nothing in that sort of desultory public lecture that calls for any supervision, or requires any interference, just as, under the old management by the committees of the Royal Dublin Society, if the professor was a man of sense, and the Committee consisted of persons of common sense, there never occurred any difficulty or embarrassment between them. When I was a professor, and I had to deal with a committee of the Royal Dublin Society, I do not think that during the whole 12 years I was connected with them, there ever was, for one moment, a difference of opinion between the Committee and myself, and so it always should be with regard to those short public courses.

1472. With regard to the syllabus of the special or scientific course of lectures which your lecturers deliver in the Museum of Irish Industry, that is submitted to the Department in this country also?—Yes.

1473. Do the Department generally, or have they at any time, made alterations in the syllabus so submitted to them?—No; I do not think that they ever made any alteration in it.

1474. I presume that it is from exactly the same feeling in their case, namely, perfect confidence in the professors and their conscientiousness in the discharge of their duty, that they have not made those alterations?—There they have me interposed between them and the professors. If anything went wrong about those courses they would not mind the professors at all; they would at once hold me responsible.

1475. What difficulty can you foresee in the adoption of exactly the same system, the syllabus of the scientific course of lectures being submitted to the committee of lectures, and to the Department of Science and Art in this country as exists at present, supposing a transfer to take place from the one body to the other?—Supposing you had a systematic course of lectures on geology going on which a student would be attending during the whole session, and that student entered for a regular industrial career, and supposing that professor to say something in his lecture, for instance, about transmutation of species, or any of those things talked about amongst geologists: and supposing one member of the Royal Dublin Society to get up at one of the meetings and make a speech on the subject of the heterodoxy, we will say, of the man of science, and the impropriety of such things being taught in the theatre of the society, that would cause great embarrassment; and that is a thing that might occur any day.

1476. You were connected with the society a great many years before you became Director of the Museum of Irish Industry?—Yes.

1477. Have you ever known an instance of the kind to occur?—Not of a similar kind; that is to say, no case exactly of that nature occurred.

1478. On any occasion whatever have you known a member of the society contradict a lecturer, or reprimand him for having said anything in the course of lectures he was giving?—No, not in that sense; but I have known very violent speeches made at the society.

1479. We are speaking of before the pupils?—I did not make myself understood: I would not be afraid of anything occurring in the lecture-room by any means; but what I mean is, that ordinary members of the society, or members of the council, might take umbrage, or think that they had a right to interfere in respect to the views taken by professors, and that the nature of the society would give them a power of interference, and a right to interfere and to produce discussion, which might lead to presenting the

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society in, I think, rather an unfavourable position before the public.

1480. In fact, are not the scientific lectures under the supervision of the committee of lectures at present?—No.

1481. Is not the syllabus submitted to them of the intended course?—Only so far as regards the public lectures. The committee of lectures have nothing to do with the systematic education that is given, either in the Museum of Irish Industry, or in the Royal Dublin Society.

1482. Who has the control of that?—I am entirely responsible for that.

1483. Has the Department of Science and Art any control over it?—I am responsible to the Department of Science and Art.

1484. The Department of Science and Art has the chief superintendence?—I am responsible for carrying out their instructions.

1485. Have you ever known of anything taught in the lectures of your institution being commented upon or criticised in the Royal Dublin Society?—I would rather not enter upon a matter of that sort, because my respect for the Royal Dublin Society is so great, and I am so anxious that its utility and power should be extended in every practicable way, that I would very much prefer not being pressed to give an answer to that question.

1486. You have started a supposition (which I presume you must have had some ground for), of the possibility of a certain thing occurring; I only ask you, with your thorough knowledge of the society for so many years, have you known an instance of the kind to occur?—I have.

1487. Have you any objection to state it?—No; not when I am definitely asked to do so. I have known Professor Haughton to excite in the society most fatal discussions by his speeches, in which other scientific men were attacked, and in which their characters and competency were commented on.

1488. I believe that he differed in opinion about the arrangements of the Museum of Irish Industry?—It was in reference to the questions between the Museum of Irish Industry and the Royal Dublin Society that his speech was made.

1489. But I am not speaking about differences of opinion, as to whether the establishment of the Museum of Irish Industry was a judicious measure, or otherwise; I am speaking of discussions upon scientific questions, which are the difficulties you are apprehensive about?—Such discussions have taken place. The names of scientific men have been brought in, and I may say their competency and their worth openly denounced. Though quite harmless perhaps elsewhere, or perhaps called for elsewhere, still those discussions brought into a popular assembly like the Royal Dublin Society, which is dependent for its support on the one hand upon the public, and on the other hand upon the Government, are I think extremely fatal, and it was in that sense that I said I would consider it better for the society itself, that it should be relieved from the danger of disturbing elements of that sort being introduced into its discussions, and that it should restrict itself to what I think may be an enormously extensive and a most useful field, viz., exhibitional functions, where those questions could not by possibility arise.

1490. Have those discussions to which you refer gone beyond the length of fair criticism and differences of opinion, on the scientific questions which are discussed among scientific men?—Yes, they have gone very far beyond the length of fair criticism and have involved political and religious questions.

1491. I ask you whether the discussions which you refer to as having taken place in the Royal Dublin Society ever went beyond the fair limits of criticism and the differences of opinion which exist among scientific men on those topics?—Scientific men, in discussing scientific questions with one another, make it a rule, never to introduce any topic of personal controversy; it is carefully avoided.

1492. Individuals may differ among each other as to scientific matters, and may allude to the opinions of such and such a professor, without bad consequences being likely to arise to either the society or the pupils?—Certainly; but that is a totally different matter from the sort of thing I referred to as having taken place, and as being at any moment liable to take place. At a meeting of the Royal Dublin Society any member may get up, and he may make a speech, introducing exciting topics having a political or religious reference, and the worst of it is, that though in cold blood, and on reflection, the members of the Royal Dublin Society would repudiate such a thing as absolutely as I would myself, still a popular meeting of that sort is liable to be carried away. Now, in the instance I refer to, at a meeting on the 27th April 1854, so entirely was the Royal Dublin Society carried away by a violent speech of Professor Haughton's, that a resolution was proposed, that "Professor Haughton be requested to prepare a statement embodying the substance of the eloquent speech delivered by him this day;" and that motion, on being proposed by the honourable Judge Jackson, and seconded by J. F. Waller, LL.D., was carried unanimously. When the society had time to think of it, it saw that Mr. Haughton's conduct had been most improper, that the subjects he introduced were utterly uncalled for, and that the society had acted most injudiciously in passing a resolution that his speech should be so adopted and published; and Mr. Haughton's speech was allowed to fall to the ground. The society, when really left to itself is, I am sure, as perfectly free from political and religious bias as any assemblage of a couple of hundred gentlemen that you could get together in Dublin could be; but you can never have a body of two hundred without some hot-headed people among them, and any one of the number may get up and say something which would do a vast deal of harm, and which might take a great deal of time and care to atone for afterwards.

1493. You are apprehensive that the opinions that might be expressed by any member of the society, at the general meetings, might have an effect upon the scientific education that might be introduced by the committee of lectures?—I think there would be that danger, that the confidence of the public in the system of education would be liable to be very much shaken by anything that might occur at meetings of the society, or by hasty expressions of opinion by members of the society.

1494. In any large company there may be gentlemen of exceptional opinions, but does not the very instance you have brought before the Committee rather prove that the society, as a body, would not be likely to be affected by strong

strong opinions, uttered by any individual?—I do not think the society would be permanently affected, but the society might be, for the time, affected. In the instance I mentioned, the society was affected for the time; in such a case, all the damage may be done in a single instant.

1495. Mr. *Cogan.*] As regards the speech to which you allude, was not there a vote of thanks proposed to Mr. Haughton for that speech?—There was by its adoption being voted.

1496. And carried?—Yes.

1497. I believe Judge Jackson, an eminent member of the society, was in the chair upon that occasion?—He proposed the resolution that Dr. Haughton's eloquent speech should be adopted by the society.

1498. Can you state to the Committee the general nature of the observations made in the speech of Mr. Haughton?—I was not present; I would not venture to attempt from mere recollection of what I read or was told was his speech, to give more than the general statement, that it was universally spoken of, both at the society and out of doors, as having been a very violent and intemperate personal attack which was generally attributed to political and religious hostility.

1499. Did it not make direct allusion to the appointments then made in the Museum of Irish Industry?—It made very strong personal attacks upon the individuals connected with the museum.

1500. Sir *Edward Grogan.*] Do you know the fact yourself?—I may say I do in this regard; some time after the vote of the society, when it was thought better to let the speech drop, Professor Haughton published, 19th June 1854, what I believe was a very subdued version of the matter as a pamphlet, and that pamphlet which I read at the time was a very violent personal attack upon the individuals belonging to the Museum of Irish Industry.

1501. Mr. *Cogan.*] Upon that occasion the society proposed a vote of thanks to Professor Haughton, and proposed the publication of his speech?—Yes, they adopted his speech and requested it to be embodied in a statement.

1502. At the next meeting they felt it judicious for the interests of the society to rescind that vote?—Yes, practically, the matter was let to drop.

1503. Sir *Edward Grogan.*] In the early part of your evidence to-day you give some estimate of what would be the necessary expense of conducting these establishments efficiently, have you formed any opinion of what would be the total expense necessary, supposing the whole of the educational department of the Royal Dublin Society were transferred to the Museum of Irish Industry?—The additional expense would only be the salaries of the two additional professors that I would propose to have, and the salary of an additional master attached to the School of Art (which is now one of the departments of the Royal Dublin Society); we should have a professor of mining and mineralogy, similar to the professorship which Mr. Warrington Smyth occupies in Jermyn-street, and we should have a professor of applied mechanics, similar to the position which Professor Willis occupies in Jermyn-street, and there should then be added to the School of Art a special master for mechanical drawing and perspective, that is to say, what is now called descriptive geometry, which would be 500 *l.* a-year, 200 *l.* to each professor, and say 100 *l.* to the drawing master. That 500 *l.*, I would say, should complete the establishment of the Scientific Industrial School; and so far as the Museum of Irish Industry is concerned, I do not think anything more would be necessary.

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1504. Taking the converse of that proposition, supposing the educational department of the Museum of Irish Industry to be transferred to the Royal Dublin Society, have you considered what would be necessary then?—If you established a school of industrial science, and placed it under the Royal Dublin Society, you would, of course, want the same additional officers; if you are to do the same work you must have the same men. If you merely want to continue the popular lectures, you then should only require the same staff that you now have, or even less; for instance, you would not require to keep Professor Sullivan, Professor Galloway, and Professor Davy, if you were merely to have popular lectures in the Royal Dublin Society.

1505. You have stated that, supposing the amalgamation to take place, and the plan proposed by the Commissioners to be strictly carried out as they propose, there would be an increased expenditure of 160 *l.*, being the difference between 1,760 *l.* and 1,920 *l.*?—Yes; that is, if you do fair justice to the individuals involved in the change.

1506. That comprehends the compensations to which you refer?—Yes.

1507. Roughly, what would be the amount of compensations out of the 1,760 *l.*?—Between 900 *l.* and 1,000 *l.*; when those officers died there would be an actual saving to that amount.

1508. Or, if any of those gentlemen were transferred to the Royal Dublin Society in its new capacity, of course the compensation payable to them would cease to be paid?—I have not included any that are proposed to be transferred, only those proposed to be abolished.

1509. Those are terminable charges under any circumstances?—They are charges terminable on the death of the individuals.

1510. Or, on getting some other employment under Government of an equivalent amount?—You cannot employ a man of science in any other way. You cannot make a Board of Works clerk of a chemist.

1511. In fact, the transference of the whole educational duties of the Museum of Irish Industry to the Royal Dublin Society, would involve an increase of expenditure of 160 *l.*?—The diminution of the present expenditure would be 1,760 *l.*, and the new expenditure required would be 1,920 *l.*

1512. You are of opinion that it would be more economical to continue the two institutions as they are?—For the moment, till those individuals who would be in receipt of the compensation died away, it would be cheaper to continue the two institutions as at present; but I would not regard the question of the saving of 200 *l.* as at all to be considered, I would look at the question of efficiency and benefit to the public.

1513. You consider the giving of a superior education to the people of Ireland of far greater importance than any economy of the kind that may be effected?—Very much more importance. In reference to that recommendation of the Commissioners, I would beg to say that their idea of reducing what they call instruction in mining to one professorship of geology and one professor-

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ship of mineralogy is very inconsiderate, because it really almost announces the principle that we must do nothing in Ireland but raise produce to the surface; substantially, they go to the length of saying in their Report, that the sole function of Ireland should be to simply raise raw produce and send it over to this country to be made use of. As it happens there is hardly any place in the world where certain smelting operations are more perfectly carried on than near Dublin. Sir Richard Griffith should have been aware of that, but he actually announces there that we have no right to business of that sort in Ireland; that our whole business should be to raise bullocks and ores, and that we are neither to eat the bullocks nor to smelt the ores.

1514. Mr. *Lefroy.*] In your opinion would this additional 160 *l.* be the means of making the operations of both societies as useful as they could be made, in your opinion, for the benefit of the public?—By no means; I think the result to the public would be much less beneficial than it even now is, and certainly much less beneficial than I hope it may hereafter be made.

1515. Sir *Edward Grogan.*] What personal responsibility is there as regards the education of the pupils in the Queen's Colleges beyond furnishing them with the best professors in each Department?—Those who are entrusted with the control of the Queen's Colleges are held directly responsible for the discipline and conduct of the students, and, in fact, there is a very painful degree of responsibility imposed upon the professors and officers of the Queen's Colleges in that regard.

1516. A register is kept of those who attend the special lectures of the Queen's Colleges?—Yes.

1517. That register is taken as a test, at least in part, of how far the pupils have availed themselves of the opportunities given in the college of learning any particular art or science?—Yes, there is a roll called every day at each of the lectures, and the attendance of the students is marked on the roll. If they do not attend with a certain degree of regularity they cannot get their certificates at the end of the session, nor be admitted to the examinations. But independently of that means of ensuring a regularity of attendance on the instruction which is given, there is a moral responsibility. By means of officers attached to the Queen's Colleges called Deans of Residences, a considerable surveillance is kept up over the moral and religious conduct of the students.

1518. Beyond requiring a certain attendance on the part of the students to qualify them to receive the certificate of attendance and admission to examination, do you do anything in the way of education except giving them the best professors in the Departments?—We give them professors, and we supply the professors with all the material; with reference to teaching we have the rolls to guarantee the attendance of the students, and we hold examinations at the end of the session, and award the prizes. Then each professor at the end of each session makes a report to the president, and the president examines and compares all those reports, and more or less embodies them, and comments upon them as he thinks necessary in his final report to the Queen.

1519. Comparing the system pursued in the Queen's Colleges with that pursued in the Museum of Irish Industry, is the same surveillance which is now resorted to with regard to the Queen's Colleges pursued in the Museum of Irish Industry with regard to the students?—No; we have never undertaken any responsibility on the part of students beyond supplying instructions.

1520. In the Museum of Irish Industry, you follow the same system of entering the names of the students who attend the lectures to ascertain how far they have endeavoured to take advantage of the instruction you have offered them?—Yes; a roll is kept, and the attendance is registered; and at the end of the session examinations are held and prizes awarded; but at the Museum of Irish Industry we do not consider that we have any responsibility whatever for the moral or religious conduct of the students.

1521. In what, then, consists the special responsibility as regards the education of the students which you refer to as rendering the transfer of those duties to the Royal Dublin Society unadvisable?—In the first instance, we do not consider that our system of instruction in the Museum of Irish Industry has ever yet attained its full proportions, but there is a responsibility in this regard that if anything occurred in the classes, either on the part of the professors or on the part of the students, or if anything occurred in the conduct of the students requiring intervention, the director has the power of intervening. That power and that responsibility exist, and though occasions for the intervention of that power, and for the exercise of that responsibility might not occur once in five years, still, with regard to a system of education, where you are dealing with young men, the public would never be satisfied unless an efficient power of intervention and responsibility existed. If you take, for instance, the council of the Royal Dublin Society, and anything unpleasant occurred in the classes in relation to what was taught by the professor or in regard to the conduct of the students, you would have, in the first instance, the council of the Royal Dublin Society to take it up, motions would have to be made and seconded, and there would be a great deal of discussion, and if any of those tender questions which we have to deal with on Ireland were at all brought into the matter, it might place the council of the Royal Dublin Society in a difficult position. On the other hand, where there is individual responsibility, there is no difficulty about the matter, because the director at once does what he thinks is right, and he is responsible only to the superior authority, the vice-president of the council. The parents of the students would be satisfied if anything went wrong that a direct power existed to correct it.

1522. Would your objection remain the same if, on anything going wrong, a complaint were made to the committee of lectures, and not to the council of the Royal Dublin Society?—I do not think the committee of lectures would be at all competent to deal with a question of that sort either. I would be very sorry to see it coming before them; they are a body meeting very irregularly, the same people do not always attend, and I think they would be very much embarrassed, indeed, if a matter involving any delicate question came before them.

1523. Is not the value of scientific instruction in a great degree, if not altogether, dependent upon the qualifications, and in fact, the conscientiousness

tiousness of the lecturers?—Yes; the value of instruction depends upon the qualifications and conscientiousness of the lecturers.

1524. You are most anxious that the educational arrangements and the education afforded to the people of Ireland at present existing, should be increased, and not diminished?—Certainly.

1525. Mr. *George.*] You have alluded to a transaction that took place a good while ago in reference to a motion brought on by Professor Haughton in the Royal Dublin Society; how many years ago was that?—I should think it must have been in the year 1854.

1526. The late Judge Jackson was in the chair?—He moved the resolution, adopting Professor Haughton's speech.

1527. Whatever that was, it occurred 10 years ago?—Yes.

1528. Professor Haughton is, I believe, a fellow of Trinity College, Dublin, is he not?—Yes.

1529. And a man of very eminent, scientific, and literary attainments?—Yes.

1530. Whatever topic (without going into the details of it) was brought forward in the Society, was brought forward by him, as I understand you, on his motion?—No; I stated that he made a speech on the occasion; whether he was the mover of whatever motion was before the chair, I cannot undertake to say. I find, on reference, that he was.

1531. I understand from your evidence that nobody ought to be more competent to express an opinion upon any scientific subject, as to the arrangements of lectures or the qualification of lecturers?—I believe that Professor Haughton would be very competent to express an opinion upon scientific subjects.

1532. Whatever vote was come to by the society upon that subject was at a subsequent meeting rescinded?—Yes; the matter was allowed to drop.

1533. Were you present at the entire examination of Dr. Lloyd?—Yes, I was.

1534. Are you aware that he was examined on two different days?—Yes.

1535. Did you hear him on the first day he was examined express a distinct opinion as to the fitness of the Royal Dublin Society to undertake the entire duties of scientific education and otherwise, that are now performed by the two societies, the Royal Dublin Society and the Museum of Irish Industry?—I did; but I would beg to say that Dr. Lloyd very naturally looks upon the matter from a Trinity College point of view, and that is a point of view from which I do not think the public at large would look upon it.

1536. It is unnecessary for me to ask you who Dr. Lloyd is, or what is his position in the scientific and literary world?—I have very great respect for Dr. Lloyd.

1537. I only ask you whether you heard him on the first day express that opinion as to the fitness of the Royal Dublin Society to undertake the whole of those duties?—Yes.

1538. I believe you are aware that, after Dr. Lloyd was examined on that first day, Dr. Barker's examination took place, and that Dr. Lloyd was recalled as a witness on a subsequent day?—Yes.

1539. Are you aware that Dr. Lloyd made no specific proposition that the Museum of Irish Industry should continue to exist, but that his answer on the second day on that point was given upon this hypothesis of the chairman:—"Would you wish to state to the Committee what course you would propose should be taken in the other alternative, namely, supposing the Government resolved to maintain both institutions"?—Yes.

1540. You did not understand the proposition to come from Dr. Lloyd, that both institutions should be maintained?—No.

1541. Do you agree with Dr. Lloyd in the opinion that he expressed, that the professorships connected with natural history, should be attached to the society where the great natural history collections are, and where the Botanical Gardens are?—In regard to that, as a matter of convenience, I believe it would be desirable that the lectures on natural history, both zoology and botany, should be given in the Royal Dublin Society; but I must couple that with the statement, that it is not on the ground of the existence of the very large collections there; I believe it is very undesirable that those very large collections should be made use of for teaching purposes. It is very injurious to them; it is found, as a matter of experience by all lecturers and by all keepers of museums, that in moving things out of the cases, and taking them to the lecture-room, and bringing them back again, leads to breakage and loss and disadvantage, which it is very important to avoid.

1542. I think that there was a suggestion made that that might be avoided, by there being duplicate specimens; that some should be preserved in cases that would not be removed, and that others might be removable for the purpose of the illustration of lectures?—Yes; all that the lecturer really wants is what we call typical specimens, one being enough to illustrate a whole class, a small carefully selected collection, kept quite distinct from the general large museum.

1543. Do you think that botanical lectures ought to be given in the Botanical Gardens?—I think a portion of them ought; I think the arrangement hitherto acted upon by the Royal Dublin Society in that respect, is a very useful one, namely, having about half the lectures in Kildare-street and the other half in the gardens.

1544. With regard to the latter class of lectures, I presume specimens are brought from the gardens to illustrate the lectures given in the society?—Yes, specimens are brought in.

1545. Do you object to that course?—No; I think it is an extremely proper one.

1546. With reference to the very large and valuable collection of minerals in the Royal Dublin Society, do you concur with Dr. Lloyd that it would be desirable that lectures upon mineralogy should be given where there is that valuable collection of minerals to illustrate the lectures?—I think lectures on mineralogy would be much better given in the Museum of Irish Industry, for, though the Royal Dublin Society's collection of minerals is 10 times as large as ours, still, it is precisely in the position of a great exhibitional collection, which is by no means well calculated for instruction; now, in the Museum of Irish Industry, we have a collection of a moderate size, but which is specially adapted for the purpose of lecture illustration.

1547. Would it be possible to have such a selected

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selected collection of minerals within the Royal Dublin Society itself, apart from the large and valuable collection you speak of?—Quite possible.

1548. Either by way of duplicates or otherwise?—Yes. I therefore would by no means bind myself as to where the lectures, Mr. Scott's lectures, for instance, would be best delivered. My feeling at present is, that they would be best delivered and most perfectly illustrated in the Museum of Irish Industry.

1549. You are aware of the important functions of the Royal Dublin Society in reference to agriculture?—Yes.

1550. Cattle shows and other matters of that kind?—Yes.

1551. Does not the science of chemistry enter very much into agricultural matters, with reference to manures and soils, and so on?—Very much.

1552. Do you not think, therefore, that it would be very desirable that there should be a person on the spot at the Royal Dublin Society to illustrate those matters to parties engaged in agriculture, and who naturally come to the place where those shows are held?—I think that it would be desirable that the Royal Dublin Society should have, in connection with it, an agricultural chemist.

1553. Who might, I presume, explain orally whatever processes he went through from time to time to those people who took an interest in the matter?—Yes, certainly.

1554. Do you, or not, agree with Dr. Lloyd in thinking that it would be very fitting (on the supposition that the two bodies continued to exist) that the Royal Dublin Society should have attached to it a professor of botany to lecture at the gardens, and at the society; a professor of mineralogy, who might illustrate whatever was necessary from the collection of minerals there; and also a professor of chemistry, to illustrate the matters in connection with agriculture?—As a matter of convenience, to a certain extent, I would agree with that, subject, however, to what I have just stated, that those large collections are really not capable of being practically employed in teaching. The teaching collections must be separate and distinct for the safety of the things; but there would be no difficulty in forming those teaching collections in the Royal Dublin Society.

1555. Would you or not have lectures upon those different topics delivered at the place where those collections and shows exist?—I would have them delivered in the Royal Dublin Society, to the full extent, at least, to which lectures are delivered there now.

1556. I understand you to say that you concur with Dr. Lloyd, that physics and chemistry should be lectured upon by the professors at the Museum of Irish Industry?—My idea has been that lectures on natural philosophy might be very advantageously delivered at the Royal Dublin Society; as to chemistry, I think it would be much more convenient for all parties that the instruction should be altogether given at the Museum of Irish Industry; the laboratories there are already organised on a very efficient and great scale, and it would cause very considerable expense to break them up and create new laboratories at the Royal Dublin Society.

1557. They have had at all times a laboratory at the Royal Dublin Society?—They have had; I do not wish to say anything that could be at all considered as implying that I do not very highly value the Royal Dublin Society in all its departments, but then the Royal Dublin Society have not had funds to keep up their establishment.

1558. Have they not at all times had a laboratory at the Royal Dublin Society?—They have had at all times a laboratory at the Royal Dublin Society.

1559. It is now a very defective one, because, as you say, they have not had funds to make it a better one?—Dr. Davy has made every effort in his power to give it efficiency.

1560. He has not had funds to make it as effective a one as it ought to be?—I believe that is so.

1561. Do I rightly understand your opinion to be that, although you think the several matters I have alluded to should be lectured upon in the Royal Dublin Society, you think that those lectures ought to be given by professors under the control of the Museum of Irish Industry?—No, I would not use such an expression as that; the professors should not be considered to be under the control of the Museum of Irish Industry; I would say under the direct control of the committee of council, the heads of the department, who would of course act through a responsible representative, such as the director of the Museum of Irish Industry.

1562. However, you would have them professors of the Museum of Irish Industry, in no way under the control of the Royal Dublin Society, and merely lent, if I may use the expression, to the Royal Dublin Society by the Museum of Irish Industry?—That is their position at present, with the exception of Mr. Davy and Mr. Scott. In the case of Mr. Jukes, and Dr. Barker, Dr. Sullivan, and Dr. Morgan, who lecture in the Royal Dublin Society, they are not responsible to the council of the Royal Dublin Society. They are solely responsible to me and to the Department of Science and Art.

1563. You would follow out that plan by putting the other professors under like control?—Under similar control.

1564. You are the responsible head of that body?—Yes.

1565. In fact, you would put the whole of the professors who would lecture upon scientific topics or upon those other practical matters in Ireland, under your own direct control, subject, of course, to the superior control of the Department of Science and Art?—I would not like to put it in that way, that I would put them under my own direct control. I should rather myself personally have nothing to do with the matter; but I consider, in order to carry out a proper system of education, they ought to be put under the direct and responsible control of a single administrative head, and who again would be directly responsible to the Committee of Council of Education here.

1566. *Chairman.*] I presume the system you would advocate would be one similar to that now carried on in Jermyn-street?—Precisely.

1567. Mr. *George.*] It is your opinion, right or wrong, that the whole of the professors who are to deliver scientific lectures in Ireland upon those several topics we have been alluding to, in more immediate connection with the Royal Dublin Society, ought to be placed under the control of one head, to be of course indirectly responsible to the

the Department of Science and Art?—That is my opinion.

1568. *Chairman.*] You merely wish that the director of this establishment should be placed in precisely the same position as Sir Roderick Murchison is in Jermyn-street?—Yes; precisely.

1569. Mr. *George.*] You propose to deprive the Royal Dublin Society of all control over every one of those matters to which I have alluded?—With regard to lectures, I am convinced that any person in the position I have described, would be most anxious, and ought to be most anxious, to carry out those functions in full co-operation with the Royal Dublin Society, and to secure to the Royal Dublin Society all the advantages of lectures on their premises that they have at present, or ever have had. Then, with regard to the responsible control and the direct efficiency of the administration, I do not believe that it could be secured, if the council of the Royal Dublin Society had any official power of interfering in the matter.

1570. In fact, you would desire to transfer from the Royal Dublin Society, of which you were yourself once a professor, the entire control over all the scientific functions that have been enumerated by you?—I believe that such an arrangement would be for the benefit of the country, and also for the benefit of the Royal Dublin Society itself.

1571. Did you hear the evidence of Dr. Corrigan?—Yes.

1572. Did you hear him state that he would regret very much to see all those different functions placed under the exclusive control of any individual however eminent?—I have no distinct recollection of his having given that particular opinion.

1573. Was not Dr. Corrigan distinctly asked whether he disapproved of the Royal Dublin Society because it was liable to popular control, and was he not then asked in effect, whether he would like to entrust those functions to the Museum of Irish Industry, or a similar or kindred institution, under the exclusive control of one head?—I remembered, at the time that Dr. Corrigan was looking rather to the formation of some body, such as the committee of lectures, or the Senate of Queen's University, of which he is a member.

1574. Will you answer my question first, and then give any explanation which you think fit; was that or not the evidence of Dr. Corrigan, that he would prefer it being under a Board?—Yes.

1575. His evidence was, that he would give it neither to the Royal Dublin Society, nor (that being the matter under discussion) to the Museum of Irish Industry, but to some Board, which I do not think he very distinctly sketched out?—I do not agree with Dr. Corrigan.

1576. You have the misfortune to differ both with Dr. Lloyd and with Dr. Corrigan?—Such differences will exist; every person is influenced to some degree by what has been his habits of thought.

1577. Mr. *Waldron.*] In part of the evidence you have given, reference has been made to the Report of the Commissioners of 1862; you were examined some 10 days before they agreed to their report?—Yes.

1578. Will you read that passage (*handing the Report to the Witness*)?—"Whether it is politic for the Government now to retrace its steps, and restore to the Royal Dublin Society the functions which had been handed over to the other institution, is a matter altogether for the Government itself to determine; but if these functions are handed over, I believe that the Royal Dublin Society will administer them ably and honestly, and that the position of the society would tend to give an amount of popularity to any of its acts which the more youthful institution might be long to acquire" (p. 94).

1579. At that time you had not in view what the probable recommendations of the Commissioners would be?—No.

1580. You had probably in your mind some plan by which the amalgamation of the Museum of Irish Industry and the Royal Dublin Society might be so arranged as to carry out all the objects now embraced by the two societies?—I had no plan in my mind. I at the time considered that my own share in the matter was at an end, and that the amalgamation of the two institutions was pretty nearly decided on; and my sole anxiety, as I may say, in giving my evidence was to endeavour, so far as my humble testimony would go, to preserve to the country the educational advantages which it has hitherto had; and I therefore stated, as I would now state, that I do not know anybody in the country to which a matter of the sort could be better entrusted than to the Royal Dublin Society.

1581. Assuming the Government were of opinion that it was not desirable to maintain two institutions, not very dissimilar in their objects, within a few minutes' walk of each other, out of the public purse, you had in your mind possibly at that time some plan, by which all those objects might be effected through the instrumentality of the Royal Dublin Society?—No, I had not. I had no definite plan in my mind. The Commissioners did not ask me for any plan, but from the way in which the matter was talked about in Dublin at the time, the impression on my mind was, that the Commissioners were inclined to report in favour of the breaking up of the Museum of Irish Industry, and I was anxious to represent to them the desirability of maintaining the industrial collections and the lectures, so that the public might not lose its educational advantages.

1582. Did it occur to you about that time, that all those objects might be attained by placing the whole of the functions under the Royal Dublin Society by some new arrangement?—No; I cannot say it did.

1583. Do you think it is possible that they could be so attained?—Not if you come to an actual systematic teaching. If you come to organise a school of Industrial Science, I cannot form any opinion with regard to that, other than that it would be entirely foreign both to the objects and to the very nature of the Royal Dublin Society; and had I been asked that question by the Commissioners I should have given precisely the same answer; but the Commissioners never started the idea of doing anything more than what had been already done. Their whole leaning was to diminish the amount of instruction.

1584. You are referring to the report, which of course was not in your mind at the time; I want to know what was in your mind at the time that you gave your evidence; were you contemplating having the objects of the two institutions preserved though the two might be consolidated?—All that I had in my mind was to express

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that for all popular instruction the thing could not be put into better hands than those of the Royal Dublin Society.

1585. It did not occur to you to form a plan as to the mode in which that might be effected?—No, I was not called upon to suggest a plan.

1586. At present the Committee of Council on Education designate an individual to carry out those different objects?—Yes.

1587. And the system he pursues is to submit the course of instruction to the Department of Science and Art for their approval?—Yes.

1588. On their approval he is to carry it out?—Yes.

1589. Do you see any difficulty in the Royal Dublin Society selecting individuals of distinguished scientific position to do something similar, if the functions of the museum were transferred to the Royal Dublin Society?—Of course, the Royal Dublin Society might appoint a manager or director of the scientific instruction, as they appoint a director of their museum, but I do not think that it would at all work: I do not think the public would have any confidence in it, or that the parents of the students would have confidence in it; in the first instance, if any question arose as to anything that that director had done, that gentleman would canvass the council, and he would get certain persons of the council to agree with him, while certain other members of the council would disagree with him; you would then have a series of debates in the council on the subject, and at last the council would arrive at some sort of resolution, and would send that resolution over for approval here; then the people here might differ from the society, as they often have differed from the council of the society, and then would commence a negotiation between the committee of council and the society. Many cases of that sort have already occurred, and all real responsibility vanishes when you come to deal with bodies of that sort.

1590. Would not you have, in such a case, what you are so anxious for, namely, individual responsibility?—No; you cannot in that way have such a thing as individual responsibility; individual responsibility means one individual responsible directly to another.

1591. Or to a body?—You begin with Parliament; the vice-president of the council is responsible to Parliament; if he does anything that Parliament disapproves of, he resigns; then the vice-president must have an individual under him who would be directly responsible to him, and whom he may dismiss if he does anything that he disapproves of, but if you interpose a body of 21, any one of whom in his individual capacity is just as good a man as the vice-president of the council, and cannot be dismissed or turned out, or done anything to; all you can do is to negotiate by letter; that may spread over three months; you cannot manage a plan of education conducted like that.

1592. You appear to ignore the committee of council?—The committee consists of the president and the vice-president.

1593–4. Are there not some other members?—I do not know the internal machinery of the committee of council.

1595. Is not the individual respresenting them in a somewhat analogous position to that of a person who might be deputed by the council of the Royal Dublin Society in case this suggested arrangement were carried out?—No. Take, for instance, such a case as has occurred with the master of the School of Design, or with the librarian. An officer of the Royal Dublin Society does something, we will say, that is wrong. There is a proposal in the council to remove him or punish him. He goes round canvassing, and gets certain members to support him, and then there is a debate, and there is no knowing how that will end. I believe that the Royal Dublin Society and its council are as good a body of 21 gentlemen as could be collected together in any country in Europe; but by the very nature of their constitution they can only debate, they cannot administer if it comes to any real difficulty.

1596. Do you think that what you suppose is at all likely to happen, that if a body such as the council of the society, were to impose certain functions upon an individual, they would be likely to call him to account for what he was doing; do not you think it more likely that they would allow him very large discretion in carrying out objects of that kind?—Yes; but in such a constitution either one of two things must occur, there must either be a laxity with respect to responsibility, or there must be a liability to debates in the council. If you leave everything to your scientific men there is an absence of responsibility. For instance, when I was professor at the Royal Dublin Society, I did just as I liked. I wanted to make a position for myself, and I was very active, but my committee never dreamt of interfering with me. The tendency of a large body is to either leave their officers to do as they like without the existence of any real responsibility, or else if a question is raised it leads to debates, and you have a certain proportion of the council taking one side, and a certain proportion taking another. The moment you get to that you cannot manage your education, because the very existence of those debates will frighten the public, and they will not adopt or support a system of education liable to such fluctuating influences.

1597. Let us suppose that, instead of being elected a professor, you had been deputed to carry out such objects as I have hinted at from your experience of your relations with the council, do you think they would have been likely to interfere with you, if they had given you those other duties to perform?—From my experience of the matter, if I were offered that function by the Royal Dublin Society, though I am sure almost every member of the Royal Dublin Society is my personal friend, I certainly would not dream of accepting such an office.

1598. I am talking of the time you were acting as professor; assuming at that time, instead of appointing you a professor of the society, they had offered you some such duty as this, do you think that the council would have interfered with you from your experience of the relations between you and the council while you were acting as professor?—At that time, I knew nothing whatever of the world; and I probably would have accepted anything they had offered me, but I do not think any person in such a position could go for 12 months without something unpleasant occurring.

1599. With respect to this return in the report of the number of persons who competed in the examinations in 1861–2, that, I presume, is an accurate return probably furnished by you?—I suppose it is.

1600. Deducting from the Parliamentary grant

grant the item of 500 *l.*, but leaving in it that for building and rent which you have deducted from it, how much would that leave for each pupil who competed; would it be something like 71 *l.*; and is not that a great deal to pay for the instruction of pupils?—If you apply that test to any educational institution; if you take one of the colleges in Oxford, and divide the number of prizemen by the revenues of the college, you would find that you were paying 700 *l.* or 800 *l.* a-year a-piece.

1601. The State does not pay for that?—In one way or another it does; if you take any educational institution, and try it by the same test, you would find a worse result.

1602. I take it that those who offer themselves for examination are those we are to deal with, because you say numbers are no test of success?—Numbers are not a direct test of success, but I would say it was not at all fair to take the numbers that compete for prizes as being the measure of the amount of instruction and the benefit conferred. If you take 70 or 80 students, it is very well known amongst them who are the best men, men who are most competent, and who are morally certain to get the prizes. All those young people communicate with one another, and talk over the matter, and they know to within very narrow limits precisely the position each will take at the examination; hence those will not go in for examination who feel that they have no chance, and where there are only two or three prizes given in the class, three at the outside, more generally speaking, only two, I think it is a very remarkable thing that you will have 11 or 12, or 18 in some cases, going in for two prizes. It is a very large amount of competition where the young men have had the opportunity throughout the session of measuring one another's ability. I therefore would entirely protest against the benefit of the instruction being measured by the mere number going in for prizes.

1603. You say, in reply to question 1323, "The sole test of success I may say in this country, is numbers," and you go on to say that that is not a fair test?—Yes, I regret it; I mention it as a difficulty which we have to contend against, that here in London you measure the success of an institution solely by the numbers attending it; you measure the utility of an examination solely by the numbers that go in for prizes; you may have a class of 100, deriving very great benefit from the instruction. There would, of course, in that 100, be five or six persons very much cleverer than the others, and when it comes to the examination for prizes, where the examination is voluntary, it is only the five or six, who have a very good opinion of themselves, who will go in; but in estimating the value to the country of that course of instruction, you should at least measure it by the total number attending, and not by the number going in for examination.

1604. I find the number of registered students in zoology is 16, and the number competing at the examinations is 10?—That was a very large proportion indeed. The zoological class is one not attended by any large number of students at any time, and a large number of them really laid themselves out to learn the subject, and thought they were competent to go in for examination.

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1605. I dare say your attention was drawn to the remark in the Commissioners' Report about analyses made for public bodies. The Government Commissioners were under the impression that those analyses were made without any fees, were they not?—I do not recollect the words of the report; I find in the return that Mr. Hamilton moved for that that is not strictly the case. There is an item of special expenses for the inquiry into the process for distilling peat, 100 *l.*; and special expenses for the enquiry into proposed processes for the preparation of flax.

1606. Those were not supposed to be included in the functions of the officers of the museum?—None of that grant went to the officers of the museum. It was special expenses connected with the conducting of the experiments; for instance, in the investigation of the process for distilling peat, there had to be erected large distilling furnaces, and various complicated apparatus, to defray which that 100 *l.* went. I may mention that, in the case of analyses or investigations directed by the Government, no officer of the museum has ever received any payment; but it has been found necessary on one or two occasions to employ persons specially not connected with the museum, and of course they have had to be specially paid. That was the case in the examination into the processes of preparing flax. Experiments had to be conducted at Kildangan, where the process was being carried out on a large scale; persons had to be sent down for making experiments, and they had to be remunerated; but no officer of the museum has ever received any extra payment for anything ordered by the Government.

1607. Do you follow your students after they leave the museum, to see what situations they obtain afterwards?—In many cases we do; we try, whenever we can, to get information as to how they have become established, and we have been in many cases very much gratified by finding that they have obtained good positions. For instance, one gentleman, Mr. Wonfor, a student of the museum, and who got prizes, has the superintendence of the great bleach works of Mr. Richardson, near Newry; and a gentleman, named Pontifex, who also received prizes in the museum, has the managing of a concern in London, to which he was appointed in consequence of the testimonials he brought over.

1608. Could you give us a return of any of those whose history you have traced, since they left you?—Yes; I will have a return prepared, and send it in.

1609. Sir *Edward Grogan.*] Do you keep any account of the appointments which your students obtain after they leave you?—No; no official record; but we obtain information from time to time.

1610. Sir *Colman O'Loghlen.*] Are you aware that the lectures on botany, in the gardens, are delivered at eight o'clock in the morning?—Yes.

1611. Do you think that is a reasonable hour for the delivery of lectures?—It has this advantage, that they are delivered in the summer when getting up early in the morning is not probably a disadvantage; then it leaves the daytime clear for either business or other studies; so that I do not think that a disadvantage.

GEORGE F. MULVANY, Esq., R.H.A., called in; and Examined.

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1612. *Chairman.*] YOU are the Director of the National Gallery of Ireland, are you not?—I am.

1613. There is a paragraph in the Report of the Commissioners of 1862 to this effect: "Some advantage would be gained if all the Parliamentary grants in aid of science and art at Dublin were in like manner included in the estimate of the Royal Dublin Society, and were paid through its medium, inasmuch as they would then be annually brought under consideration in one point of view, and the council of the Royal Dublin Society would have an opportunity of making any representation which the circumstances of the time might render proper in reference to them;" did the governors and guardians of the National Gallery of Ireland take exception to that paragraph in the report?—They did.

1614. There is another passage in the Report of the Commissioners of 1862, in which they recommend that the Irish geological collections should be removed to that portion of the National Gallery building which has recently been erected for Archbishop Marsh's Library; did the governors and guardians of the National Gallery take exception also to that portion of the report?—They did, in the strongest possible manner.

1615. Did they draw up a report upon the subject of those two paragraphs?—Yes.

1616. Will you read that report to the Committee?—This is a memorandum drawn up by the governors and guardians of the National Gallery of Ireland, and forwarded to the Lord Lieutenant, "The governors and guardians of the National Gallery of Ireland having had under their consideration the Report of the Commissioners appointed by the Lords Commissioners of Her Majesty's Treasury, to inquire into the Royal Dublin Society and the Museum of Irish Industry, find that suggestions have been made in that report concerning the National Gallery, from which the governors and guardians feel it to be their duty to record their entire dissent. They do not very clearly understand what is meant or designed by the proposition embodied in the principal of those suggestions, namely, that some control should or might be exercised by the council of the Royal Dublin Society in regard to their proceedings. They think it sufficient however, in answer to it, to point to the Act of Parliament under which they are constituted (17 & 18 Vict., cap. 99, amended by the 18 & 19 Vict., cap. 44), as giving to the governors and guardians the most ample and independent corporate powers for the purposes of the gallery, those powers being thus conferred upon them by the Legislature, the governors and guardians cannot submit the exercise of them to the control of any other body, and they consequently deem it their duty, as trustees for the National Gallery of Ireland, to protest against and disclaim the assumption of any such controlling power, or interference on the part of the council of the Royal Dublin Society. To another suggestion made by the Commissioners, although apparently of a temporary character, the attention of the governors and guardians has been also directed. It is that the Irish Geological Collection, now deposited in the Museum of Irish Industry, might be removed to that part of the National Gallery building which has been designed for the purposes of a public library, but it is not yet made ready for that object. To this proposition they desire to express their most decided objection. The collection itself is one wholly unconnected with any of the purposes of a gallery of art, such as is contemplated in the Act of Parliament constituting the National Gallery. The building has been planned for two special objects, designated in the Act a national gallery of paintings, sculpture and the fine arts, and a public library. The removal to it of Primate Marsh's Library is one of the objects of the Act, and all the votes of Parliament towards the erection of the building specially point to this double use of it as that for which it is designed, and to which the sums voted are to be applied. It is stated that the building has been erected at the public expense, and this is assigned as a reason for the proposed application of part of it to the geological collection; this however is not altogether correct, the large sum of 5,000 *l.* has been contributed to the building by the trustees of the Dargan Fund, on the faith of its being devoted to the purposes declared by the Legislature, and under a special sealed contract with the building trustees. When finished, the building is, by a clause of the Act, to be handed over by the building trustees to the governors and guardians for whom in fact they are trustees, and who will thenceforward have the legal possession of it, and the power to regulate how it is to be used. Without their consent, therefore, as well as that of the trustees of the Dargan Fund, it is apprehended that no rightful authority exists to devote any part of the building to other uses; and against the proposed even temporary use of it in the manner contemplated by the Commissioners, the governors and guardians most strongly protest as one in itself incongruous and unsuitable, and which it would be a breach of their public trust to assent to. It is alleged that the governors of Marsh's Library are not now prepared to sanction the removal of that collection of the new building, but of this the governors and guardians have no official knowledge, and they do not believe that any such decision has been come to. A resolution was long since passed by the governors of Marsh's Library for the removal, and the governors and guardians of the National Gallery have more than once met the governors of Marsh's Library in consultation respecting the plans of the building as provided by the National Gallery Act, and which have, accordingly, had their joint approval. But even if that library should not be removed from its present locality, it appears to the governors and guardians of the National Gallery that the portions of the building intended for a public library could be appropriated with great advantage to the extension of the present Sculpture Hall and Galleries of Paintings. With their present collections the governors and guardians will almost entirely occupy the hall and existing galleries without having adequate available space for further donations or loans of works of art. Upon all these grounds the governors and guardians

guardians of the National Gallery very earnestly deprecate the application of any part of the building to the purposes indicated by the Report of the Commissioners. The governors and guardians have hitherto received the public grants made to them by Parliament on votes specifically and separately made to them as an independent corporate body. They are not aware of any good ground for a departure from this course in future votes, and they would desire its continuance, in preference to the plan recommended by the Commissioners of having their vote incorporated with that of the Royal Dublin Society, as being more satisfactory to them, and, in their judgment, more useful to the public, in bringing their vote more distinctly under Parliamentary notice. Signed on behalf of the governors and guardians, *George F. Mulvany*, R.H.A., Director."

1617. I believe it is not the intention to remove the books from Archbishop Marsh's Library?—As far as I am aware, it is not. Even up to the present time, however, there has been no official notice upon the subject, nor any decision come to by the trustees of Marsh's Library. The general feeling and opinion is, that they are not anxious to remove it: in fact, Mr. Guinness, who has been laying out so much money on the cathedral, wishes very strongly that the library should remain where it is.

1618. Do you consider that that space intended for the library would be required for the exhibition of casts and objects of art, in connection with the National Gallery?—I do, most decidedly. It would be well, probably, to place before the Committee the facts regarding the present division of the gallery. The Sculpture Hall, which forms the lower portion, is only one-half the length of the building; it is lighted from one side, which is a very appropriate mode of lighting sculpture, but which affords a comparatively small amount of space for exhibition. The casts occupy nearly all the available space, though the collection is very small, and forms only an infinitesimal portion of what we hope to have. At present we are getting further casts, and the space referred to would be decidedly available, and well adapted for the exhibition of our casts.

1619. Sir *Colman O'Loghlen.*] What has been the total sum granted to the National Gallery for the building?—£. 21,500 has been granted by Parliament.

1620. Do you know how much was granted to the Scotch National Gallery?—As well as I can recollect it was 30,000 *l.*

1621. Have you any statement to make to the Committee, with respect to what was mentioned by one of the witnesses about the rent of the National Gallery?—I have very little to say about it, except that we find ourselves in rather an anomalous and unpleasant position, appearing to be in possession and unwilling to pay. The fact is, that the governors and guardians are not legally in possession of the building. The building trustees are still the responsible parties. The original intention of the Act, by which the Royal Dublin Society was empowered to obtain a lease in perpetuity of the lawn, was to enable the Royal Dublin Society to complete a new museum upon one portion of the lawn, and that the National Gallery should be erected upon another portion of the lawn; and when the lease was obtained, the Board of Trade was to decide in what proportions each party was to be responsible for the rent. In our estimates, as submitted, we have inserted a sum for rent; but the Treasury have rather ignored it, and with them lies the whole question.

1622. Mr. *George.*] Nobody has paid the rent?—We have paid no rent.

1623. Sir *Edward Grogan.*] What was the annual rent the trustees of the gallery undertook to pay?—The building trustees undertook to pay 100 *l.* a-year.

1624. How many years have elapsed without any payment being made at all?—Since the commencement of the building; I think the first stone was laid in 1859.

1625. There is more than five years' rent due to the Royal Dublin Society?—I do not know as to the amount due to the Royal Dublin Society; I only know the period during which the building has been in course of erection.

1626. Sir *Colman O'Loghlen.*] I believe ever since the opening of the National Gallery, it has been open to the public on Sundays, after the hours of Divine Service?—Yes.

1627. How has that worked with respect to the working population of Dublin?—It has worked admirably. I have been in the constant habit, from the commencement, of observing the demeanour of the visitors on Sundays, and I have been very much pleased to see the interest taken in the exhibition by the working classes, and the people at large. We have had between 4,000 and 5,000 between two and five o'clock on Sunday, and all orderly and well-behaved.

1628. Have you heard any complaint of misconduct or disorder on the Sunday, in consequence of the admission of the working classes?—None.

1629. Sir *Edward Grogan.*] Do you know what has been the total cost of the building?—£. 21,500 was granted by Parliament, and 5,000 *l.* was given by the Dargan Trustees; it must have cost 26,500 *l.* up to the present time.

1630. Has any grant been made by the Government to the trustees of the gallery subsequent to its erection?—Yes.

1631. What was the amount of it?—There is an annual grant for the maintenance of the gallery.

1632. To what amount?—They allowed 500 *l.* last year, and they propose, in the Estimates for this year, to increase it to 600 *l.*; it is miserably below the requirements of the gallery. We were not enabled to put sufficiently forward the necessities of the gallery till we had opened; we have been open since the 1st of February, and our working expenses are far beyond that amount.

1633. The 500 *l.* is applied to the staff, the cleansing, and matters of that kind?—Yes.

1634. Has there been any additional grant made?—Yes; there was a grant of 2,500 *l.* made two years ago, I think, towards the purchase of works of art.

1635. What has been the total amount subscribed by Government to the building and its contents up to the present moment?—£. 21,500 towards the building, 2,500 *l.* towards the collection of works of art, and 750 *l.* for a year and a-half's maintenance. A sum of 983 *l.* has also been allowed for painting, papering, furniture, and gas-fittings, to be completed under the surveillance of the Board of Public Works of Ireland.

1636. What do you consider would have been the necessary sum to keep up the establishment in

in full efficiency?—I think, to keep up the establishment properly, there should be from 800 *l.* to 1,000 *l.* a-year allowed.

1637. For staff and cleansing purposes?—Yes, for the entire maintenance of the institution.

1638. Not including purchases?—No.

1639. In the original plan of this building, part of it was to be appropriated to Marsh's Library?—Yes.

1640. I understand from you that no formal and official notification has been made to the trustees of the Gallery, that the trustees of Marsh's Library do not want to remove their books there?—None.

1641. So far as any official notification goes, that intention may still exist?—Yes.

1642. If that transference shall not take place, do I understand it to be the view of the governors and guardians of the Gallery, that that part of the building appropriated for Marsh's Library shall be thrown into the Sculpture Gallery?—Yes. There are two portions, the portion on a level with the Sculpture Hall, and a space above it, which is called the Mezzanine Storey; all that space might be, with very little expense, made available for the purposes of the Gallery, and is required.

1643. You think that the portion of the building already allocated to sculpture and paintings is insufficient for what the collection may be expected to come to?—Yes.

1644. You think that the whole building should be allocated to that purpose?—Yes; the extension of the collections will soon require the entire space.

1645. What was the special objection on the part of the guardians of the Gallery to the transfer of the geological collection there?—I cannot say, further than is recited in the memorandum, namely, that it appeared to them totally disconnected from the purposes of the National Gallery, and that it also appeared to them to be the introduction of a thing never contemplated either by the Dargan Committee, who agree to give the 5,000 *l.*, or by the trustees of the National Gallery themselves; and they held that it was necessary, as they have done, to express their entire dissent to the proposition, and to put forward the grounds upon which they thought it very desirable to have that space made available for extension.

1646. Is it your impression, and that of the trustees of the National Gallery, that if you had a larger available space in which to hang pictures and to exhibit statuary, you would be more likely to obtain bequests from individuals?—Much more. I hold that the fact of there being a place suitable for such deposits would not only induce bequests, but donations. In connection with the National Gallery we should not lose sight of this fact, that a great portion of the collection has resulted from private donations. The 2,500 *l.* which the Treasury granted was only in aid of 3,100 *l.* which has been subscribed by private donations, and we are still urging the desirability of seeking for further donations.

1647. The pictures in the gallery which were the donations of individuals are additional to any money contributions, of which you have been speaking?—Yes.

1648. And you are in hopes that if larger space is afforded for the exhibition of works of art, donations of that kind will be made to you?—Yes.

1649. For that purpose the trustees are anxious to have the whole building appropriated to a picture gallery and a statuary gallery?—Yes. With regard to one portion of the building there could be little further extension of our space for pictures. The upper galleries, which we have at our control, run the whole length of the building; but the lower hall would be available for the extension of the collection of casts, and space in the Mezzanine Storey would be available also, perhaps for smaller pictures or engravings or drawings, and various works of art.

1650. Mr. *George.*] In the memorandum which you have read, the trustees of the National Gallery say that they are constituted under an Act of Parliament; by whom are those building trustees appointed?—By the same Act of Parliament, the building trustees were appointed to receive all the monies for building, and to expend them. They are separate and distinct from the trustees of the National Gallery, and they have no connection with its collections.

1651. Supposing the building to be entirely completed, and the purpose of the constitution of the building trustees to be accomplished, in whom is the property of the National Gallery building to remain?—In trustees. It was intended that it should be vested in a joint Board of the trustees of the National Gallery, as nominated under those Acts of Parliament and the trustees of Marsh's Library, in which joint Board should be vested the charge of the building when the building trustees should have fulfilled their functions.

1652. They were, in fact, to be component parts of a corporate body?—Yes; having no action in reference to the care of the National Gallery itself, or the functions connected with it, but merely being a joint Board to accept the building for the special purposes of each.

1653. Independently of the arrears of rent, who is intended to pay the ground-rent of the premises for the future?—The Government; we have no private fund for maintenance. Any private funds we can obtain we seek to appropriate to the extension of the collections.

1654. It is not intended to appropriate the ground on which the building stands, and not pay the rent, is it?—I do not suppose it is.

1655. The value of the paintings, I suppose, would be a good deal more than 500 *l.*?—There is very good security for the rent.

1656. Mr. *Waldron.*] That document which you have read is signed by you on behalf of the governors and guardians; was there a special meeting called to consider that?—Yes.

1657. Did many of the governors and guardians attend?—Certainly.

1658. You say in that memorandum that the trustees of the Dargan Fund have contributed 5,000 *l.* on the faith of its being devoted to the purposes declared by the Legislature; have you had any communication with the Dargan Trustees?—Yes; I have spoken personally with many of them.

1659. They had no meeting upon the subject?—No.

1661. Could you give a return of the visitors on Sundays?—

1660. Have not the trustees of the National Gallery here presented some pictures to your trustees?—They have deposited pictures with us. By arrangement with the trustees the pictures not

not required for the National Gallery here, or which may be purchased in large collections where they want to get only one or two particular pictures, should be distributed equally between the National Gallery of Dublin and the National Gallery of Scotland, and latterly South Kensington Museum comes in as a third party to receive them; but they are only deposited.

1662. Temporarily deposited?—Yes.

1663. Have any of them ever been removed?—No.

1664. Do you apprehend that any will be?—Some may; they may wish to fall back upon some of those which they have deposited with us. The last pictures deposited with us were removed from the National Gallery here, for the purpose of making the room available for the Turner Collection, for which it was necessary to find room at the expense of the nation, within a certain period, or the bequest would have lapsed, and therefore such pictures as that, they might possibly look for.

1665. You think that they would demand the possession of those again?—I do not apprehend it, but possibly they might.

1666. Mr. *George.*] They were not merely duplicates sent to you?—No.

1667. Mr. *Waldron.*] Do I understand you rightly to say that your trustees, if they had the building, or part of the building intended for Marsh's Library handed over to them, intended to appropriate it to the purpose of exhibiting engravings, water colour drawings and sketches?—No, I merely state that as my view of what it would be most immediately available for.

1668. What had they in view when they authorised you to sign that document?—The general extension of the collection. I should mention with regard to the casts, that even anterior to this, our minds had been fully made up on the desirability of getting additional casts, as far as our means would go. I should have mentioned to Sir Edward Grogan, probably one other item of donation from the Treasury, which was a grant of casts from the British Museum to the amount of 260 *l.*; but the carriage and the expense of the casts, cost us an equivalent out of our private means.

1669. Could you give a rough estimate of the value of the pictures deposited by the Trustees of the National Gallery?—I could not, at a rough guess, because the value of pictures is very variable.

1670. Sir *Edward Grogan.*] You mentioned that you had a right to expect an occasional grant of pictures from the authorities in this country equally with the South Kensington Museum and the National Gallery in Scotland?—Yes.

1671. Have you, in point of fact, received a grant of pictures of that kind?—No; we have merely had pictures on deposit.

1672. You have had no absolute grant?—No.

1673. The only grant you have ever received from the authorities in this country was those casts you spoke of?—Yes; and the 2,500 *l.* for the purchase of pictures.

Jovis, 12° *die Maii*, 1864.

MEMBERS PRESENT:

Cogan, Mr.
George, Mr.
Gregory, Mr.
Grogan, Sir Edward.
Leader, Mr.
Lefroy, Mr.
O'Loghlen, Sir Colman.
O'Reilly, Major.
Peel, Sir Robert.
White, Colonel Luke.
O'Connor Don, The.

WILLIAM HENRY GREGORY, Esq., in the Chair.

FREDERICK JOHN SIDNEY, LL.D., called in; and Examined.

F. J. Sidney, LL.D. — 12 May 1864.

1674. *Chairman.*] You are Secretary to the Committee of Lectures?—I am.

1675. What is the amount of your salary, and from what sources is it derived?—My salary is 50*l.* a-year; and, whenever I go into the country, to hold inspections or examinations, I receive a fee of 2*l.* a-day.

1676. What do those fees amount to in the year?—They fluctuate from one year to another; at the time when they were at the highest, when the system was in full operation, before the grant was withdrawn, they averaged about 150*l.* a-year.

1677. There was a proposal made to increase your salary, to which Dr. Lloyd alluded; have you any remarks to make to the Committee on that point?—I am sorry that any question arose before this Committee with reference to myself personally, but as it has arisen it is inevitable that I should refer to all the facts relating to it. When Dr. Ball was secretary to the committee of lectures, there were no examinations held in provincial towns, and the duties of secretary being comparativly light, his salary was fixed at 50*l.* I have reason, however, to know, that he considered this quite inadequate, and was with difficulty induced to accept it as a temporary arrangement. Shortly previous to his death the examination system was being organised, and in the year 1857, when I succeeded him in his office, the system was brought into full operation; of course the labours of the secretary were vastly increased, and in the year 1859, a still further increase to those duties was caused by the introduction of the science schools. Several representations were made to the Department relative to the inadequacy of the salary, but without effect. And finally the committee at a full meeting resolved, until some better arrangement could be made, to pay their secretary out of the funds at their disposal, which then amounted to about 1,000*l.* a year. The sum they fixed on was 250*l.* a-year. The mode in which they arrived at this sum was as follows: they found that, taking the average of the two preceding years, the fees received by the secretary for holding examinations and inspecting classes in provincial towns, at the usual rate of 2*l.* per day, was something under 150*l.* a-year. They considered it desirable, for various reasons, that these fees should be replaced by a fixed annual sum, and adding to this the salary for office work, which they raised from 50*l.* to 100*l.*, they fixed the gross sum at 250*l.* This resolution was communicated to the Department by the Lord Chancellor; the answer returned by the Department was to the effect that, having established a system of science classes, which was applicable to the entire kingdom, the necessity for provincial lectures had ceased, and not considering it desirable to have a separate officer for Ireland, they withdrew the 400*l.* which they had up to this time granted to the committee, but stated that they were willing that, for that year the 500*l.* should be applied in establishing science classes, and that, out of this sum, 250*l.* might be paid to the secretary for his labour in organising such classes, intimating that they would resume the consideration of the subject the following year. I do not think this offer was rightly understood by the Committee the other day. It was not intended to offer this sum to the secretary for conducting a few courses of lectures, to be paid for out of the remaining half of the 500*l.*, but for the onerous duties involved in working out the Science Minute throughout Ireland, in the manner I have explained. This offer was declined; and I have ever since received only the 50*l.* a-year, besides the usual fees for inspections.

1678. Mr. *Lefroy.*] Are you allowed your expenses in addition to those fees?—Yes; the inspector is allowed 2*l.* a-day for his fee, and travelling expenses besides.

1679. *Chairman.*] The committee of lectures has the entire management of all the educational arrangements, both in the Royal Dublin Society and in the Museum of Irish Industry, except the technical courses, has it not?—Except the technical courses in the Museum of Irish Industry, and except also the courses given by Professor Davey and Mr. Scott in the Royal Dublin Society.

1680. We had from Dr. Lloyd, at the last examination, an account of the manner in which the committee of lectures was formed; will you now explain to the Committee the mode in which those lectures are conducted; taking first the metropolitan lectures?—The duties of the committee with regard to the town lectures are, as Sir Robert Kane has stated, extremely light; they are, in fact, merely formal, for the thing has now worked itself into shape. There is a syllabus prepared at the commencement of each year by the professors, and that syllabus, as far as relates to the public courses of lectures, is laid before the committee of lectures for their approbation each year; but I believe that, in fact, the syllabus of one year is generally a duplicate of that of the year preceding. Since the courses were arranged as they now stand, there really is very little

little to do in reference to them; the committee merely formally approve of the syllabus; I have never known them make any variation in the syllabus proposed by the professors. So far as regards the town courses, they are the same from one year to another.

1681. What number of lectures are there in a course?—The usual number of the public lectures, that is, the introductory part of the course, is 12, but I rather think there are sometimes two courses of 12 given, making 24.

1682. A fee is charged for the advanced course?—There is a fee charged for the systematic courses.

1683. The morning lectures are attended by a different class from those who attend the evening lectures, are they not?—I would fancy that the same persons who attend the morning or technical courses would also attend the public courses, because the two are really part of one another; the public courses are the introductory courses, and very few students who intended to avail themselves of the systematic courses, and to go in for examination, would fail to avail themselves of the preliminary instruction to be obtained from the public lectures.

1684. Is it the case that the same persons who attend the introductory courses attend the advanced courses?—To the extent I have stated. I have known students who go in for the paid courses also attend the others; but, of course, a very large number attend the public courses that do not attend the systematic courses. There are, perhaps, 180 or 200 persons attending the public courses; and there are possibly 30 attending the paid courses.

1685. It was stated, in the evidence before the Commission of 1862, that the classes attending the morning courses were governesses and people in a better position of life, whereas, the evening systematic courses were attended by persons more of the artisan class?—So far as I know (though I am not quite certain), the systematic courses are given in the afternoons in the Museum of Irish Industry, and not in the evenings. There are no strictly morning courses, because they are not till four o'clock; but the afternoon courses, as distinguished from the evening courses, are the technical courses; I do not think the technical courses are generally given in the evening.

1686. With regard to the provincial lectures; how are they conducted, who are the professors, how are they chosen, and how are they paid?—I will refer to page 73 of my evidence, given before the Commission of 1862, and give the same answer now: "The committee have, in their service, a staff of lecturers of high scientific position; the professors of the Science and Art Department *ex officio*, some of the professors of the Queen's Colleges, and others, who have from time to time been added on special application. The committee select, each year, some of these gentlemen to deliver lectures in provincial towns. They are obliged to reside in the town for three weeks. For this service they receive 50*l.*, out of which they have to pay their expenses, and to provide diagrams and apparatus. At the commencement of each year, a number of applications are received from different towns; these are carefully investigated by the committee, who select those they think most desirable. The towns so selected have each to pay 10*l.*, in aid of the funds of the committee. An examination is held after the conclusion of each course, at an interval varying from a fortnight to two months, according to circumstances; perhaps averaging about six weeks. Until the present year, the committee have had a staff of four examiners appointed each year, and distinct from the lecturers for that year, who prepare the questions. I am present at every examination, superintending it. The answers are in writing. The examiners report to the committee on the answers, and prizes are awarded."

1687. What is the meaning of the expression, that lecturers have from time to time been added on special application?—The lecturers who were previously specified would be entitled to be on the staff of lecturers *ex officio*. Any professor of the Science and Art Department, or any professor of the Queen's Colleges, in those subjects which we deal with, would, almost as a matter of course, on his application be put on the staff of lecturers; but there are other men distinguished in science, who do not occupy either of those positions, and whose names have been from time to time added. I have before me a list of the lecturers appended to the regulations, which I will hand in presently, and I will mention a few of them who do not come under the description of being either Professors of the Department of Science and Art, or of the Queen's Universities in Ireland. There is, first, Mr. Bailey, who is the Palæontologist of the Geological Survey of Ireland, a man highly distinguished in his branch. There is Dr. John Barker, the Curator of the Museum of the College of Surgeons in Dublin. There is Dr. Cameron, Professor of Chemistry and public Analyst to the City of Dublin. There is Dr. Clarke, the chief Lecturer on Natural Philosophy, Chemistry, and Physiology to the Commissioners of National Education in Ireland. There are two professors of Queen's College, Birmingham, Dr. Divers and Dr. Lawson. There is Dr. Wright, the Lecturer on Zoology to Trinity College, Dublin; Dr. Shaw, a Fellow of Trinity College, Dublin; and Mr. Scott, Lecturer on Mineralogy to the Royal Dublin Society. I think that I have named most of those who are not, as it it were, *ex officio*.

1688. What is the average number of persons who attend those provincial lectures?—It has been stated at 150. I would not say whether in a series of years it would be 150, but I am quite safe in saying 100.

1689. What is the number of those who go in for examinations?—Fifteen probably would be a very fair average.

1690. Of what classes principally are the persons who attend those provincial lectures?—In answer to that question I would give the same answer that I gave to the Commissioners, at page 73, where I was asked the same question: "The persons who attend them are, so far as I know, of a very mixed class. Largely composed of the families of the small shopkeepers in country towns, members of mechanics' institutes, young men belonging to literary and other associations, and boys from national schools, they also comprise a varying proportion of the better classes. In some places, however, these will not go near them, as they do not keep up any connexion with mechanics' institutes, and other similar bodies. In others, they patronise them freely. Their presence is of course desirable, as, besides giving character to the thing, they purchase tickets, and help to make it pay its expenses." Then I am asked, "Are the persons who attend in any cases

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of the artisan or operative class?" "They are; but this class has, in this country, seldom sufficient general education to profit by scientific instruction. Shop assistants, and the families of small shopkeepers, as well as boys from national schools attend largely. If you go below these, you will scarcely find the necessary previous education."

1691. Will you explain to the committee the course pursued by a locality when it wishes to establish provincial lectures?—At the commencement of each year we issue advertisements, stating that the committee are prepared to receive applications from bodies in provincial towns for lecturers to be sent down to them.

1692. Sir *Edward Grogan.*] How do you advertise?—We advertise for a series of weeks in the "General Advertiser," which is a paper distributed throughout Ireland gratuitously, so that it goes to every corner of the land. I get a letter from the country requesting me to send down the needful form, which I accordingly send. These are the regulations of the committee (*handing in the same*, vide *Appendix*); and I send also a form of queries to which they have to write answers, which form I will also hand in (*handing in the same*, vide *Appendix*). They have to specify the name of the town, the institution, or committee making the application, the course of lectures which they desire to have, specifying two or three courses in order that the committee may make a selection, the estimated number of persons expected to attend, in what building the course is to be delivered and when, what are the charges for admission, whether there are any free admissions, whether it is intended to form classes for instruction in the subject of the proposed course, and whether any steps have been taken in reference thereto; and then they undertake to pay the 10*l.* That form is filled up and signed by the local committee and the secretary, and sent up to me. When a specified time arrives (which by the regulations must be not later than the 31st of March in each year), I draw up a list of all those applications; all the applications are at the same time laid before a sub-committee in the first instance, in order that a very careful scrutiny shall be exercised into the applications, and that every claim may receive fair consideration. The committee of lectures have for many years thus delegated to a sub-committee the duty of scrutinising the applications, and reporting to the full committee. That sub-committee consists of Sir Richard Griffith, Sir Robert Kane, Dr. Lloyd, and Professor Galbraith. They carefully examine all the applications, and they select out of the number (the number of applications generally exceeding what we are able to comply with) those which they think have the most claim. The list thus selected comes before the meeting of the full committee, and they discuss it, and if they approve of it, it is confirmed, or they may suggest some changes and alterations. I have known changes and alterations made in the full committee varying the recommendation of the sub-committee. So soon as that is arranged I write to the towns that are selected to send up 10*l.* forthwith, and on their sending me the 10*l.* the arrangement is finally confirmed, and I communicate with the lecturer, and also with the secretary of the provincial institution, informing them that such a course has been appointed, and I put them in communication with one another.

1693. Appointing a time?—The time, within certain limits, is left to arrangement between the lecturer and the local institution. I say to the lecturer, "You are appointed to deliver a course of lectures in such a town, in the month of July or August," or whatever the month may be; but the precise day and all the minor details are afterwards arranged between the lecturer and the town.

1694. *Chairman.*] Upon what principle of selection do you go as regards the towns?—One of the first principles upon which the committee proceed is this, to diffuse the operations of the committee of lectures, as far as possible, throughout the country. Inasmuch as the number of courses they are able to give is so very small, and as the courses are necessarily so short, one of their leading objects must be to open up the country, as it were, and to diffuse a taste for science rather than to give a deep and thorough scientific education, which can scarcely be done in nine lectures. They accordingly lay down as a principle wherever a new town applies (I mean a town which has never had a course before) to comply, if they possibly can, with that request. Another principle which they act upon is this: that if a town has been disappointed for two or three years in succession, they will endeavour, if they possibly can, to give that town the preference over others. Those, and other considerations of like kind, are what weigh with the committee of lectures. They are always considerations of a public character, and never anything private or personal.

1695. I have received a letter from a gentleman at Drogheda, who seems to take considerable interest in scientific education, in which he complains that for upwards of four years, a town of the great importance which Drogheda, from its population and manufacturing industry, must be, has not received any assistance from the committee of lectures. Is that the fact?—I have opened one of these reports of the Science and Art Department at random, and it turns out to be the report of 1862; and in looking at the tabular return in that report of the provincial lectures for the previous year 1861, one of the towns which strikes my eye is Drogheda: so that in the year 1861 they had a course. There have been only two years since then, 1862 and 1863.

1696. I presume that if you had more funds, you would be able to give more lectures?—Yes; we should be most happy to do so.

1697. If you are unable to provide lectures to many important towns, you are only restricted from doing so in consequence of the inadequacy of your funds?—Entirely so. With reference to that particular statement, I am not aware whether there has been an application from Drogheda for each of the years since 1861. There may have been an application in one of those two years; but I could not say whether there has been in the second.

1698. Sir *Edward Grogan.*] What is the name of the lecturer who delivered the lectures at Drogheda in 1861?—Professor Shaw.

1699. *Chairman.*] The complaint would have less force if it should turn out that there had been no application from Drogheda during that period?—Yes; I believe that there was an application from Drogheda; but I doubt very much whether there was one each year; but many towns have applied two or three years in succession, and we have been unable to supply them with

with lecturers. Cork has applied for two or three years in succession, and we have been unable to give it lectures; Bandon has applied for three years in succession, and it was only with great difficulty, and under peculiar circumstances, that we were able to give it a course this year; Portlaw applied for two or three years in succession, but we were unable to comply with its application; Aughnacloy has applied for two or three years in succession, and we had a most pressing letter from that town; and, individually, I was most anxious that they should have a course this year, but it was impossible. It is quite common (we having so small a fund to devote to the purpose, and there being so many applications from various towns), for a town to apply for two or three years and not get a lecturer sent down; for instance, as I have alluded to Bandon and Cork, I may mention that there were applications this year from Bandon, from Cork, and from Youghal, three important towns, and all very near one another; Youghal was a new town, which had never had a course; Bandon and Cork were towns which had been disappointed three years in succession. There were a number of applications from other towns. The question was, what were the committee to do; I remember suggesting that Cork should be selected, but the committee said, "We cannot give it to all three of those towns. Youghal must have it, because it is a new town. We cannot give it both to Bandon and to Cork, because they are so near each other;" but they selected Bandon, because Bandon has just built a new lecture hall, and they were anxious to have a course of lectures to inaugurate it. That is exactly one of the principles upon which the committee have acted in other cases. They did that in Lisburn upon the inauguration of the new Mechanics' Institute. Bandon got the preference this year, simply on public grounds. Cork is in the same position with Drogheda, with this difference, that Cork, I think, has applied every year; and I forget whether Drogheda has.

1700. Are you acquainted with Mr. Dowling?—Yes.

1701. He is a gentleman who has had great success as a certificated teacher under the Science Minute?—He has been very successful in Cork and other places as a teacher of science classes under the Science Minute.

1702. I presume, any statement made by him would naturally deserve the attention of the Committee?—I should say so.

1703. I have received a letter from Mr. Dowling in which he makes certain objections to the lecture system. The first objection he makes is, "that each course consists only of nine lectures, a number which is quite inadequate to convey even an elementary knowledge of the merest rudiments." Is it the intention of the lecture system to systematically educate the people, or is it to clear the way and to be the pioneer as it were for infusing a taste for scientific acquirements?—The object you have last stated of clearing the way and pioneering is certainly, I may say, one of its primary objects. It is quite out of the question to suppose that a course of nine lectures can make a man a chemist or a natural philosopher, or anything of the kind; but it is also a mistake to suppose that all that is done by the professors when they go down to the country is limited to a course of nine lectures. On that I will take the liberty of reading one of my answers to Sir Charles Trevelyan, at page 82 of the Commissioners' Report:—"It is quite a mistake to suppose that the instruction given by our lectures is of such a very superficial character as you appear to assume. I must explain the real nature of our work a little more fully. Both the lecturer and myself get into communication with the local committee perhaps a couple of months before the course is to begin, with a view to organising a class of students to read for the examination. The lecturer recommends certain text-books to them for study in the interval. When he goes to the town he is bound by our regulations to remain there for at least three weeks, so as to give the students ample opportunities of consulting him. He generally meets the special class, who intend going in for examination, on the alternate days, putting questions to them, and explaining any points on which they may feel a difficulty, and giving them directions as to their studies in the interval up to the examination. Some five or six weeks after the course terminates the examination is held. The work connected with each course thus extends over a period of three or four months. The questions at our examinations are far from being of a superficial character, and will bear comparison even with those set by the Department for examination after a year's study." And I handed in to the Commissioners some examination papers on geology that they might be contrasted with the papers of the Department of Science and Art, not by way of disparagement of that Department, but in order to show that ours were as little open to the charge of being superficial as were theirs.

1704. Will you explain to the committee why so long a period intervenes between the time of the lectures and the examinations?—That is in order to allow the students time to read. The course of nine lectures we look upon rather as directing their attention to the subject. The lecturer recommends the text-books, and sets the students going on the subject.

1705. You do not consider that lapse of time an objection?—On the contrary it is a great improvement on the previously existing state of things. The examination used to follow immediately upon the close of the lectures, and we found that open to the objection that the whole thing was a mere trial of memory, but in order that it should not be a mere trial of memory, and that the students should have time to read, it was decided that an interval of about a month or six weeks should take place. That was one of the very reasons why I have been sent down to superintend the examination instead of the lecturers holding the examinations. One of the objections made years ago by Dr. Playfair was, that the lecturer himself held the examination immediately on the course being terminated, and that that was open to the twofold objection, first, that the lecturer who was interested in making the course turn out successful, held the examination himself; and secondly, that by having the examination immediately after the lecture it left no time for the class to study. In order to remove both those objections, the system was introduced of sending me down with a set of questions to conduct the examinations at a considerable interval after the lecturer, and bring the results up to town to be reported upon. That we look upon as one of the best features in the system, one of the things

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that takes away from it as far as we can the imputation of its being superficial. Having said all this, I do not wish to convey that the courses are not to a certain extent open to the objection of being of a sketchy character; any course of the kind must necessarily be nothing more than sketchy, but if I refer to the syllabus of a school whose reputation stands justly high, I mean the Jermyn-street school here, I find the objection of superficial ought not to be attached to our courses unless it be applied to those of Jermyn-street also. In the syllabus for the present year of the lectures of Professor Tyndall, whose fame is European, and whose lectures it is a privilege to attend, his course of experimental philosophy consists of 32 lectures, thus divided: three on magnetism, five on frictional electricity, five on voltaic electricity, two on air and water, that is, pneumatics, and hydrostatics, three on sound, seven on light, and seven on heat; such a course as that, however admirable those lectures may be, can be nothing more than a sketch; the lecturer can call attention to the leading facts and principles, illustrating them by interesting experiments, but still such a course can be nothing more than a mere outline. No man could, in two lectures, investigate all the details of hydraulics and pneumatics; we, for instance, give a course of nine lectures upon those subjects; Dr. Barker, who is our professor of physics, has several times lectured on hydrostatics and pneumatics, in a course of nine lectures. Heat forms one of our courses of nine lectures, whereas at Jermyn-street they have only seven on heat. I do not say that by way of disparagement of Professor Tyndall's courses, because I believe them to be excellent, but I wish simply to guard ours against the imputation sometimes brought against them of being superficial.

1706. You, to a certain degree, coincide with Mr. Dowling that it would be expedient to have a more extended course of lectures if you had the means?—Clearly.

1707. Mr. Dowling also objects to the time of year when those lectures are delivered as not being suitable for the purpose; and in the memorial that has been sent to me from Drogheda, I find the same objection stated in this manner: "The lectures are generally delivered during the summer months, a period of the year unsuited for the purpose, the winter months being the period when they could be made more useful, and the time when lectures are generally delivered in schools, colleges, &c." Does your experience confirm that remark, that the lectures would be more useful if they were delivered during the winter than in the summer?—In many places I think they would.

1708. What is the objection to their being delivered in the winter?—Because, in the first place, you cannot get the lecturers whose duties call them to the colleges, the Museum of Irish Industry, and so on, when the winter session is going on, to go down and spend three or four weeks in the middle of their session in those country towns. It is quite open to those places that want winter instruction to have it; all they have to do is to start one of those classes such as Mr. Dowling conducts. Those very people in Drogheda who make those complaints, I think, have had the benefit of Mr. Dowling's instruction the last two winters. But, I should also say, I believe, in many towns in Ireland they prefer the autumn and the spring to winter for their lectures, for this reason, that it enables students to come from a distance, which they could not do in the winter nights. I have known cases where some of the most successful and distinguished pupils have come many miles. I have known them come five miles and nine miles; and I remember one case in which one came 16 miles to attend our course, and he carried off a prize or medal at the end of it. I should also say that I have not received any complaints upon the subject. I know in Drogheda they do prefer to have their courses in the winter; they also have had a fancy for having only one lecture each week; their object being to spread the course over the winter, to which we have no objection, when it can be done. We have been enabled so to accommodate them in Drogheda, on account of its proximity to Dublin. I think this very course delivered by Professor Shaw, to which I have referred, was delivered once a week during the winter months. It was delivered during the months of October, November, and December, so that Drogheda, of all places, has no reason to complain. We were enabled to accommodate Drogheda in that way, because the lecturer was easily able to run down and deliver his lecture, and return again to Dublin. That could not be done in the case of a distant town, so that it seems to me that Drogheda has no cause of complaint upon that score.

1709. If a general wish was expressed on the part of towns for winter lectures, do you think you could make arrangements in any way to provide them with lectures in the winter?—No; it would be quite impossible, as a general rule, to provide lecturers of the class we at present send; gentlemen of high position, and competent to give courses which would be attractive, and which would create a taste for scientific acquirements; it would be quite impossible to get such men to leave their other avocations and go down to a place in the country, and stop there three weeks, for the remuneration which they would get. You could not get Professor Tyndall or Professor Faraday to leave their work in London, and locate themselves in a provincial town in England, during the winter months; 50 *l.* would not pay them, nor five fifties.

1709*. That again, like the former objection with regard to the paucity of lectures, is a matter entirely of finance?—It is a matter of finance: If our funds were large enough to enable us to keep a special staff of lecturers, with no other duty than to attend to our behests, the thing could then be done to a certain extent.

1710. Major *O'Reilly.*] You could not expect to get men of the same high position as lecturers, unless your funds were very largely increased?—Certainly not. In point of fact, I am not at all sure that it is not better as it is, because it drives the towns to look rather to what we are anxious they should look to, namely, local resident teachers of the class of Mr. Dowling, who would stay among them, and who would be thoroughly competent to teach those artisan classes standing in need of scientific instruction. It is the most economical system, and, I believe, the soundest in principle. If a lecturer is sent down to a town in September, those who attend his lectures are set on the *qui vive* with the interesting experiments he shows them, and they are induced to supplement that course of instruction by trying to get among themselves a local teacher to conduct one of those science schools.

1711. Mr.

1711. Mr. Dowling also alleges that "the system of lectures is not adapted for the teaching of science practically and experimentally, because students can never be enabled to do practical work by mere description. This opinion is borne out by the fact that but few of the large and important towns containing a working population to whom the lectures might be useful, and for whom they were intended, make application for them; they are principally confined to towns of quite another character, such as watering-places, &c." Is it correct, in the first place, that "the system of lectures is not adapted for the teaching of science practically and experimentally, because students can never be enabled to do practical work by mere description"?—I think that is correct. I think mere verbal or oral instruction on such a subject as chemistry to be satisfactory ought to be supplemented by class or laboratory teaching.

1712. Mr. Dowling says, in a subsequent part of his letter, that the lecture system and the class system are naturally antagonistic; do you consider there is any kind of rivalry or hostility between the lecture system and the system of science schools?—As to that, I have the opinion expressed by Dr. Lloyd the other day, also the opinion of the council of the Royal Society of London, and the opinion of the council of the British Association, which coincide with the opinion of the eminent gentlemen who form the committee of lectures at Dublin Castle over and over again expressed, that such is not the case, their opinion being that the combination of the two systems is the very best arrangement that can be devised. I wish to say, if I thought there was anything antagonistic between them, or if it were necessary that one of the systems should fall to the ground, my opinion is, it should be the lecture system. I think so highly of the class system that, if it was proved that the class system would thrive if it were not for the provincial lectures, I would say let the provincial lectures go to the wall.

1713. The object of the lectures is to induce a taste for scientific instruction, and the object of the schools is to give solid instruction?—Precisely.

1714. Is this statement correct, "that but few of the large and important towns containing a working population, to whom the lectures might be useful, and for whom they were intended, make application for them; they are principally confined to towns of quite another character, such as watering-places, &c."?—There are two incorrect statements in that; there is first an unfounded assumption (I do not know upon what authority Mr. Dowling states it) that those lectures were intended for the large towns; but, in the second place, he states that but few of them make application; that is entirely and utterly unfounded; we have more applications from large towns than from small. Cork has applied over and over again; Belfast has had, I forget whether one or two courses; Derry has had courses; Limerick, Clonmel, Waterford, and Brandon frequently. Then, as to watering-places, I will read the names of the towns in which we have given lectures since the commencement of our operations: the following were the places in which lectures were delivered in 1854: Wicklow, Londonderry, Clonmel, Drogheda, Dungannon, Limerick, Omagh, Waterford, and Middleton. In 1855, Galway, Ballinasloe, Waterford, Cork, Ballymena, Coleraine, Dungannon, Wexford, Sligo, Armagh, Bandon, Aughnacloy, Limerick, Omagh, Killnean. In 1856, Ballymena, Bandon, Belfast, Carlingford, Carlow, Carrickfergus, Drogheda, Kinsale, Limerick, Londonderry, Omagh, Waterford, Wexford. In 1857, Ballymena. Carlingford, Carlow, Drogheda, Dungannon, Enniskillen, Kilrush, Londonderry, Omagh, Portlaw, Sligo, Strabane. In 1858, Belfast, Strokestown, Parsonstown, Ballaymahon, Carrickfergus, Aughnacloy, Waterford, Bandon, Cork, Londonderry, Drogheda, Limerick. In 1859, Ballymena, Ballina, Newry, Ballymahon, Armagh, Kilrush, Clonmel, Enniskillen, Lurgan, Dungannon, Limerick, Cork. In 1860, Carrickfergus, Dromore, Sligo, Strokestown, Waterford, Kinsale, Portlaw, Bailieborough, Lisburn, Londonderry, Limerick, Clonmel. In 1861, Belfast, Cork, Larne, Ballymena, Carlingford, Tullamore, Bandon, Drogheda. In 1862, Galway, Carrick-on-Shannon, Aughnacloy, Swords, Dungannon, Armagh. In 1863, Omagh, Galway, Enniscorthy, Oldcastle, Manorhamilton, Waterford, Limerick. Those are all the courses delivered since the committee was established, and among them all there is not one single town that comes under the denomination of what would be considered here a watering-place, unless every town on the seaboard is to be considered a watering-place. I suppose Mr. Dowling means to imply that we give those courses at watering-places for the convenience of fashionable people, or for the convenience of the lecturers.

1715. Is Kilrush a watering-place?—I never heard of anyone going to Kilrush as a watering-place, though they do to Kilkee. When the lectures were delivered at Kilrush I was there attending a meeting of the institute, and a suggestion was made that some of the lectures might be given in Kilkee, eight miles off, where there is a large and fashionable concourse of people every summer. I told them, that unless they provided cars to carry all the students from Kilrush to Kilkee and bring them back, they could not do it, and the idea was given up.

1716. Is Portlaw a fashionable watering-place?—It is not a watering-place at all; Portlaw is a small town, the growth of which is entirely due to Messrs. Malcolmson, the great shipowners and cotton factors. I believe their factory is the largest in Ireland. Portlaw is a town composed almost entirely of their operatives; I doubt if there is a single person in the place unconnected with that factory.

1717. I presume, after what you have stated, you do not agree with this statement in Mr. Dowling's letter: "During the last five years of which we have any reports there were 50 courses of popular lectures delivered; 17 of the 33 parliamentary boroughs, and seven of the 155 municipal towns shared the committee of lectures' favours, whilst, for want of better applicants, the remaining courses of lectures were forced upon 12 small and unimportant towns or villages"?—We have always more applications than we have means of complying with. As to forcing our lectures anywhere, the idea is absurd.

1718. Mr. *George.*] In deciding to what towns you will grant a course of lectures, do you take into consideration at all whether they are parliamentary boroughs or municipal towns?—Never. With respect to one statement in that letter, that it was for the large towns that those courses were intended, the committee have generally gone on precisely the opposite principle. When they

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have had a number of conflicting applications they have, for instance, said, "Cork has had many courses; it ought to do something for itself; here is a small town applying for a course, why not give them a lift?" and we sometimes find that we have better answering at the end of the courses in a small town than in a large. I may cite Bailieborough as an instance of that. Sir John Young made an application for Bailieborough, and the course was given. It is a very small town; but there was a very large examination class; as many as 36 students came up for examination, as well as I recollect, and the answering was some of the best we ever had. The Committee have acted on no such principle as that they are intended for the large towns. The Committee have always said, after a large town has had a few courses it ought to be able to do something for itself.

1719. Mr. Dowling considers that letters in favour of the system, coming from such places as Aughnacloy, Swords, Portlaw, &c., with about 1000 inhabitants each, are of very little value?—I do not endorse Mr. Dowling's opinions, nor his statistics. Mr. Dowling is quite welcome to consider these reports of very little value, but the committee of lectures consider them of very great value.

1720. Mr. Dowling's objection seems to be against giving lectures in those small places, instead of continuing them in the large towns?—I have stated the principle upon which the committee of lectures proceed. In the first place, they wish their operations to have as wide a field as possible; and, in the second place, they consider that a large town like Cork, which has already had several courses, ought to be able to do something for itself, either by local subscription or by procuring a resident teacher.

1721. It is also stated that, in many towns, those popular lectures are not delivered in places where persons of all grades might attend them. What reply have you to give to that statement?—Such a thing as allowing anything like a sectarian, or religious, or political motive, in any shape, to interfere in the selection of towns or places, has never weighed with the Committee; in fact, I think their names ought to be a sufficient guarantee that nothing of the sort would be likely to occur. The Committee has been in existence now 11 years, and such interest is taken in their work by members of that Committee, that, from the commencement, the Lord Chancellor has attended every single meeting, with the exception, I think, of about three, when he has been away from home. It is not likely that a Committee, composed of such gentlemen as those who form the Committee, and who take such an interest in it, would allow themselves to be influenced by such motives. A course of lectures must be delivered on the application of some local institution or committee; we get an application from a literary association, from Londonderry for instance; we must give it in connection with that association or not at all. In some places we have the courses attended largely by the schools of the Christian Brothers, and others of a similar character; and if we have applications from places where the courses would probably be attended by persons of the opposite persuasion, we give the courses to them too; so that nothing takes place that ought to offend the religious prejudices of any denomination. I remember, a few years ago, a course was applied for from Wexford, which the Committee granted; shortly after the Committee granted it, a letter came from the secretary of the local committee in Wexford, stating that it was some young men's association, and that it was the habit of that institution to open every lecture (and, I think, to close it) with prayers by the vicar of the parish. I brought that letter before the Committee, and they instructed me to say, that however commendable such a practice might be in itself, yet, as they thought it would be likely to offend and lead to the exclusion of others of the opposite creed, they thought it was not desirable; and that unless they waived that custom, the lectures would not be given. The gentlemen on that Committee would not waive it, and the lectures were withdrawn and given in another town. That shows how the Committee endeavour to avoid anything that might lend even a colour to any imputation that they act with reference to religious considerations. At an examination I held at Ballina, I met two Roman Catholic clergymen, and the same at Limerick. In the institutes in the South and West of Ireland the members would be principally Catholics, while in places in the north of Ireland they would be of the opposite religious opinions.

1722. Major *O'Reilly.*] Would there be any objection to granting a series of lectures on the application of a purely denominational body. For instance, would your committee object to grant a course of lectures on an application coming from a Church of England Young Men's Society, or from a Roman Catholic Young Men's Society?—Not if there was no other application from the town. Supposing a Church of England Young Men's Association at Derry sent an application to us, and there was no other application from Derry, and we considered that Derry was a very proper town to have a course, it being a large and important town, if the committee had a lecturer to spare, undoubtedly they would send him to that place. I am not aware that any objection has ever been made by the committee of lectures to giving a course of lectures on the ground that the application came from a denominational body.

1723. Mr. *Lefroy.*] You would, in deciding upon the application, take into consideration whether the lecture-room in which the lectures were proposed to be given was most adapted to the purpose in respect of capacity?—Yes, certainly. It does not at all follow, that because an application comes from a denominational institution, that, therefore, the lectures are delivered in the room belonging to the body, because it very often happens that they have no room large enough. The Town-hall and the Court-house are generally the places where the lectures are given. I fancy that, in the majority of cases, they are given in the Court-house, or the Town-hall.

1724. Mr. *George.*] Would you grant a course of lectures where there was likely to be an exclusion of any body from the lectures on religious grounds?—Certainly not. I have instanced Wexford as showing how we guard against such a thing.

1725. *Chairman.*] Have any objections been made to you, as the secretary of the committee of lectures, in regard to the institution that has applied for the lectures, or to the place in which the lectures have been held?—I never heard such an objection.

1726. Mr. *George.*] The lectures are open to all, and intended to be open to all?—Yes. If a complaint

plaint were brought before the committee of anything that had tended to the exclusion of any body, most undoubtedly they would take the matter up, and take very good care that no recurrence of such a thing should take place.

1727. *Chairman.*] Obligations are urged by Mr. Dowling to the disproportion between the cost of the system and the benefits accomplished. He says, "In 1858, 12 courses of lectures were delivered, for which the lecturers were paid 600 *l.*, the cost of management and letter writing 20 *l.*, equalling 3⅓ per cent. on the cost of the lectures. For 1859 the lectures cost, &c., were similar in all respects to 1859. In 1860, 12 courses were delivered, costing 560 *l.*; the expenses being 60 *l.*, equal to 10 per cent. on the cost. In 1861, eight courses were delivered, costing 400 *l.*; the expenses were 180 *l.*, being equal to 45 per cent. on the cost;" do you know how those calculations are arrived at, and how do you account for the discrepancy?—I presume the way he has calculated is this: he has simply taken the number of courses delivered in each year, and the gross funds of the committee, and divided those funds by the number of lectures, taking the result as the cost of each. I presume that is the principle upon which he has gone.

1728. Is the whole of the sum of 500 *l.*, which is in the hands of the committee of lectures, applied to lectures?—No; the error he has fallen into, in drawing the inference that the expense of management has increased in a rapid ratio, is traceable to this cause. He seems to be unaware that a considerable portion of the funds of the committee have, since the year 1859, by the Minute of the Committee of Council on Education, been applied to the establishment, inspection, and working of the science classes. That has altogether escaped his notice.

1729. With respect to the science schools; in the year 1859 the science school system was introduced into Ireland, was not it?—Yes.

1730. Will you explain to the Committee what connection the committee of lectures have with the local schools under the Science and Art Department?—In answer to that question, I would refer to my evidence before the Commissioners, at page 75. Sir Charles Trevelyan asks me this question, "We will now go to the establishment of schools under the Science Minute; what has been done by your committee in this respect"? My answer is, "In the month of October 1859, the secretary of the department, Mr. Cole, being in Dublin, asked me to undertake the introduction of schools under the Science Minute into Ireland, for which, he said, my connection with the committee afforded great opportunity. I said, if the committee approved of it, I would be happy to undertake the work, and, at his request, had a meeting convened for 17th October 1859, at which Mr. Cole attended; Mr. Cardwell was also present, and took an active part in the discussion. The following minute was passed: "The committee proceeded to take into consideration the Minute of the Department of 2d June 1859, relating to science instruction, with a view to extending its operation to Ireland, and adopted the following resolution: Resolved, That it is desirable that the operation of this minute be extended to Ireland under the management of this committee; and, in order to the more effectually carrying out its objects, that a portion (not exceeding one-half) of the annual grant to this committee be applied to the establishing of class instruction, instead of the present system of professorial lectures. The details of the measure to be reserved for future consideration." I then immediately applied myself to the work, and entered into communication with those towns which I thought afforded the best prospect of success. The first thing to be sought after was to procure suitable teachers. This was not an easy matter.

1731. The English Science Minute contemplates payment solely by results?—Yes.

1732. You found it impossible on the first introduction of the science system into Ireland to adopt the principle exactly as it is in force in England?—We did, for the reason that we could not find any local resident teachers.

1733. What course did you take to obviate that difficulty?—The Science Minute contemplates resident teachers; none such were to be found. I could not find, even in the large towns, any one who was both competent and willing to take a science teacher's certificate, and open a class. The committee then decided on employing for a time, teachers of their own, who should be sent to three towns in succession, for a period of three months in each. After considerable delay, I procured a young man (Mr. Dowling) who had been educated in the Museum of Irish Industry, and set him to work in Limerick, Clonmel, and Cork. The committee guaranteed him a certain sum, I think 20 *l.* for each town, in addition to what he could make under the Science Minute. I think they afterwards made some addition to that. It was found inconvenient to send him to three towns, and we afterwards had to reduce the number to two. We found he could not manage more, inasmuch as too great an interval took place between the instruction and the examination. I also took Mr. Tate from Bristol; he was the most highly certificated of all the science teachers of the Department; and I am very sorry to say that he is now leaving us, having been appointed to a situation under the Geological Society in London.

1734. Have the science schools been very successful?—They have been very successful.

1735. I presume that you found great difficulty in obtaining certificated teachers, seeing that you were obliged to go to England to obtain one?—Very great difficulty.

1736. It would have been necessary, would it not, if it had not been for the instruction given in the Museum of Irish Industry, to have gone altogether to England for certificated teachers?—It would, for the teachers we want. We had not funds to pay more than two. When we got Mr. Dowling and Mr. Tate, we had got all we were able to pay.

1737. With a view of carrying on the science system, you attach great importance to having some school of instruction in Dublin, where teachers may be brought up?—Very great importance.

1738. It was formerly the case, was not it, that the examinations for certificated teachers were held at South Kensington only?—Yes.

1739. So that young men in Ireland, who wished to obtain certificates under the Department, were obliged to go over to England in order to obtain those certificates?—Yes.

1740. Did many go over?—Very few, so far as I know.

1741. Has the system been changed lately?—Yes.

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Yes. Last November, for the first time, the department adopted the arrangement of having three centres of examination for teachers' certificates, namely, one in London, one in Dublin, and one in Edinburgh, held on the same days and on the same papers; I superintending the examination in Dublin, and another inspector superintending the examination at Edinburgh.

1742. How many came up to that examination in November?—Twelve or thirteen.

1743. When a candidate for science certificate went up to South Kensington, he had his expenses paid if successful, had he not?—He had. If he was unsuccessful, he paid his own expenses.

1744. Seeing that very few of those young men would go to South Kensington, even for a day or two, with the probability of their expenses being paid, is it not extremely improbable that those young men would be at the expense of going over to London, and remaining in London for a considerable period, while they were obtaining the necessary requirements to obtain a certificate?—Very few indeed could do so. I do not see how teachers of the class of which we are speaking could afford the expense.

1745. You consider that to have a central school of instruction in Dublin is a most important matter?—I think it a most important matter, and a most desirable thing.

1746. Do you think that such a school as that may be established in the Museum of Irish Industry?—In the Museum of Irish Industry, or any analogous body properly arranged and governed.

1747. Sir *Edward Grogan.*] Previously to the change which has taken place by holding examinations in Dublin, how many Irish students attended the examinations in South Kensington in any one year?—Speaking from memory, I do not recollect more than two or three. The returns from South Kensington would give it you. I do not think it was more than three or four in the whole three years.

1748. Whereas, now that the examinations are conducted in Dublin, 12 or 13 have come up for examination?—Yes.

1749. It was no doubt owing to the expense that they would incur in coming over to London, that so few came up for examination?—In the first place, it took more time, most of the men were occupied in teaching, many of them being national school teachers, who could not so easily get leave of absence for a long period as for a short period. In the second place, there was an uncertainty whether they would be paid their expenses or not, the payment depending on their success.

1750. You consider the change that has taken place by having examinations in Dublin, a great improvement upon the former system?—If we may judge by results, it is.

1751. *Chairman.*] Is the provincial lecture system on the whole calculated to raise up teachers for you?—I do not see how it is calculated to do so, except by stimulating a taste for science. In that indirect way it may.

1752. Do you think it has contributed to extend the utility of local existing institutions, and to establish others when they did not previously exist, such as mechanics' institutes, and so on?—Yes, you will find that stated on a much higher authority than mine, as being the deliberate opinion of the committee of lectures The committee of lectures say, in their report of 1860, at page 5, "These courses (which have long been an institution in this country) have been the means of largely increasing the usefulness of local, literary, and scientific institutions, and mechanics' institutes; perhaps, even, of keeping them in existence. They have led to the establishment of these useful institutions in places where they previously did not exist, as, for instance, at Portlaw." And if the Committee would allow me, I will read an extract or two from that Report from Portlaw: "Having consulted many of those who attended these courses of lectures I find that all are unanimous in their opinion of the good service which they have done in the locality. To the course delivered by Dr. Kinahan is due the establishment of our literary society, which, considering the class of those who constitute it, has had great success. It has now been in operation for nearly two years. It numbers over 100 members, possesses a reading room and a library of over 600 volumes. It holds meetings weekly during 10 months of the year, a paper being read on some historical, geographical, or literary subject on one night, and a debate being held on the alternate nights."

1753. Sir *Edward Grogan.*] Who is Dr. Kinahan?—He was professor of zoology under the Science and Art Department; he is now dead.

1754. *Chairman.*] What is the present relation of those science schools to the committee of lectures?—Since the withdrawal of the 400 *l.* formerly granted to the committee by the Department of Science and Art, the committee have found themselves unable to extend any direct pecuniary aid to those local teachers, or to give them a guarantee fund.

1755. Therefore the science schools are, at the present moment, exactly in conformity with the Science and Art Minute as in operation in England?—Yes; and I am far from saying that I think it desirable to continue that kind of guarantee fund. The committee never contemplated its continuance; they gave it for a year or two in order to start the thing, but they never intended it to be a permanent arrangement.

1756. Do you think that the science system, as adopted in England of payment by results, is calculated to work eventually in Ireland?—I hope so. I think, in the course of time, it may. We, however, do all that we can for the teachers now. We give them a kind of indirect aid. For instance, we issue syllabuses for them, and whatever influence I possess among the local committees is exerted, of course, in their favour in endeavouring to start them. We print the examination papers for them, from time to time, when they wish to hold introductory examinations.

1757. Sir *Edward Grogan.*] You are at the expense of printing those papers which otherwise the teacher must have printed at is own expense?—Yes; and we allow them to make use of our name. That tends to give them some local status, which otherwise they would not have. It is a very small aid, and a very indirect one, but it is all that we have been able to do.

1758. *Chairman.*] What is the mode of teaching in the science schools?—The regulations of the Department are that the teacher must give a course of at least 40 evening lectures to each of his classes. In the first instance a local committee has to be formed, who sign the form that is

is furnished to them by the Science and Art Department; certain rules are laid down, defining what the nature of that committee is to be. There must be a certain number of responsible persons connected with it, such as the mayor of the town, or town councillors, or magistrates; something to give it a status, and to enable the Department to know who they are dealing with. That committee signs an undertaking to superintend the class, and to be present at the examinations. The teacher then gets his class up as best he may. In some places, I believe, the local committee furnish him with a room, and pay the expenses of lighting, and so on; in other places, the teacher has to provide all that at his own risk, the local committee merely giving him the benefit of their name. The teacher gives those evening oral courses during the whole session till the time comes for the May examination. There are very stringent rules for the conduct of that May examination, inasmuch as it has to be intrusted altogether to the honour and integrity of the local committees.

1759. Who are the examiners?—The examiners are the learned professors of the Department in London, Professors Tyndall, Hofman, Ramsay, Smythe, &c. &c.

1760. Will you explain how the examinations are conducted?—Suppose the subject to be chemistry; there is a certain evening fixed for the examination, and the examination is held on the same evening throughout the three kingdoms. The papers on chemistry, prepared by the Department, are sent down the previous day to the secretary of the local committee, who is not allowed to break the seal till the class has assembled at the proper hour, which is five minutes to seven in the evening, when three of the committee must be present, who must remain present during the whole examination. No conversation is allowed; no papers, books, notes, or diagrams are allowed to be introduced, and the students must be seated five feet apart, in order to prevent any communication with one another; and the moment it is 10 o'clock the papers have all to be taken from the students, and initialled or signed by the members of the committee. They are sealed up before they leave the room, and posted at once, with the time of posting endorsed upon it, and they then come on to London by the very next post to the Department, who then report and award the prizes. Then another duty of the local committee is to certify for the teacher. He is paid upon results, and he is only paid on a certain class, that is to say, the artisan or working class; and the committee have to certify that he gave 40 lectures to the students, and that the students were of the operative or artisan class.

1761. The results of those science examinations in Ireland have been exceedingly favourable since the commencement of the system, have they not?—Very much so.

1762. Are the schools increasing, or not?—There was rather a collapse for a time, but that was owing to a cause very easily traced. As I have said all along, and as I said to Sir Charles Trevelyan, the basis contemplated by the Department is the only sound one, namely, a resident local teacher, who does not depend for his whole subsistence upon payment by results, but merely looks to it as a subsidiary emolument, so that if he makes 20*l.* or 30*l.* a-year that pays him for his evenings' exertions, and if he gets nothing, he is none the worse. There were, at the time I have been referring to, six or seven classes, several of them under the charge of Mr. Dowling and Mr. Tate, who had no other profession to follow, and whose whole subsistence was depending upon those science classes, and the moment they thought that they would not pay them any longer, of course, all those classes dependent upon them fell to the ground, so that they were reduced to a small number; however, a reaction has taken place since the examination held in Dublin, last November. Some five or six teachers, who obtained certificates, have established classes under the auspices of the committee of lectures, and there are now some seven or eight classes in work at this present moment; so that we have, at this moment, a larger number of classes than there have ever been in Ireland.

1763. As far as your observation goes, does it strike you that the lower classes in Ireland have any great desire for scientific education?—I think, if you go below the classes specified in a former answer of mine, you do not find it. I was asked at page 73 of the Commissioners' Report, "What is the position in society of those who attend these lectures?" I say, "The persons who attend them are, so far as I know, of a very mixed class; largely composed of the families of small shopkeepers in country towns, members of mechanics' institutes, young men belonging to literary and other associations, and boys from national schools." You do not find much interest taken in scientific education among the classes below those. If you go among the agricultural population, or if you go among what we call artisans, working carpenters, and bricklayers, and men of that class, you do not find very much aptitude or zeal for scientific studies.

1764. Do you find that the classes who do take an interest in scientific instruction have much aptitude for it?—I do, decidedly.

1765. Could you put in the results of the science school examinations since the commencement of the system in Ireland?—That could be better obtained from the Department of Science and Art; the science schools are directly under the Department; they have only an indirect connection with the committee of lectures. Indeed, were it not for the fact that the committee of lectures had devoted a certain portion of their funds to the organization and establishment of those schools, I do not see that they would have much connection with them at all. Therefore the returns are all made from the schools directly to the Department.

1766. You yourself inspect those science schools?—I do.

1767. By what authority?—In the way I have just stated. The committee devote a certain portion of their funds to the working of those classes, and it is by the authority of the committee that, out of those funds, with the sanction of the Department, I am paid.

1768. There is also a system of inspection kept up by that Department, is there not; that is to say, an English inspector is sent over to inspect the schools?—I cannot say that there is a system of inspection kept up, as I have had the sole conduct and management of those schools from their commencement, but the other day a gentleman was sent over from England to see see how the schools were getting on, and I was very glad to see him.

1769. Were you communicated with previously?—

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ously?—No; I did not receive any intimation that he was coming over, but when he did come I was glad to see him; and I thought it rather a desirable thing that a gentleman from head quarters should come over, so as to enable the Department to judge, with their own eyes, as I may say, of what was going on in Ireland. I think that arrangement of an inspector from the one kingdom coming over to the other a most desirable one. I should be very glad myself to have occasionally the opportunity of seeing the operation of the Science Minute in England; and it is most desirable that an English inspector should come over and see things with English eyes that might escape my notice, and say such and such a thing ought to be altered. I am not aware that anything more than that was intended by the Department. The question you put might seem to imply that an interference with my functions was intended, but I am not aware that anything more than what I have pointed out was intended, viz., that they might judge for themselves of the working of the system in Ireland. I think such interchange of visits would be most beneficial to the working of the system in Ireland.

1770. Sir *Edward Grogan.*] You think that an occasional inspection by you of the schools in England, and an occasional inspection of the schools in Ireland by a gentleman being sent over from England, would work beneficially on the whole?—Yes; I have given the reason why I think that my visiting schools in England would be beneficial, because it would enable me to see how the system is worked in this country, where it is carried on on so much larger a scale. There would be a greater variety of phases presented, as it were. I do not for a moment mean to say that my coming over here would be of any advantage to the English schools. I am quite sure that the English inspectors are fully competent to do their work, and that they could derive no assistance from my labours, but I mean that it would produce a great freedom of intercourse, and show to each inspector what was going on in each kingdom, and produce a greater unity in the whole system.

1771. *Chairman.*] Have you any suggestion to make to the Committee as to the best mode of promoting scientific instruction in Ireland?—In regard to the educational arrangements in the Royal Dublin Society and the Museum of Irish Industry you have, as in most cases, three courses open. You have two extremes and a middle course; one of those extremes, I consider, would be to transfer all the professors and lectures to the Museum of Irish Industry; the other would be to transfer them to the Royal Dublin Society; the middle course would be to divide the professors in accordance with the collections. It is not for me to offer any opinion as to which of those courses ought to be followed, representing, as I do, the body which is at this moment the connecting link between the two Institutions, and to the efficient discharge of whose functions a perfect neutrality is essential; but I will point your attention to the following considerations: If the first course be adopted, the educational arrangements must either be confided wholly to the director and professors (a mode of administration objected to on principle by Dr. Corrigan), or they must be placed under the direction of some local Board, acting with the advice of the professors. If the second extreme be adopted, I cannot recommend that the supervision should be intrusted to the different standing committees and the council, as was the case previous to the year 1854, these bodies being too numerous and too fluctuating to conduct such matters with efficiency. They should be intrusted to a small and permanent committee, as suggested by Dr. Lloyd. But suppose the middle course to be adopted, and the lectures divided between the two Institutions, you are then driven to adopt one of two alternatives; either the two staffs of professors and the courses given by them must be wholly independent of each other, each having its own governing body, an arrangement which I fear would give an unsatisfactory and disjointed system of education, or else you must place the entire system under some joint Board, analagous to the senate of the London University, in accordance with the views of Dr. Corrigan. If you make a division of the professors between the two Institutions, I do not see that any efficient mode of working the system as a whole can be adopted other than that I have just suggested. The course proposed by Sir Robert Kane, viz., to make this division of professorial duties, and at the same time to have the educational arrangements in the Royal Dublin Society placed under the governing body of the Museum of Irish Industry, is quite chimerical. I feel perfectly sure that the Society would not listen to any such proposal. The separation must either be total or the arrangements placed under a joint Board.

1772. Do you think the Royal Dublin Society would not be disposed, in case it was deprived of its educational functions, to lend its theatre and its museum to the professors of the Museum of Irish Industry?—I do not think they would submit to the educational arrangements that were to be carried on within their walls, being conducted entirely by an extern body with which they had no connection, and over which they would have no control; I dare say they would not object to some joint Board over which they would themselves have some control, and some voice in electing, but I feel convinced that they would never consent, as far as I know their temper, to allow the director and professors of the Museum of Irish Industry, however highly they might esteem those gentlemen, to say such and such courses shall be delivered by such and such lecturers, in the Royal Dublin Society, and to let the whole thing be managed by them without any interference on their part.

1773. You say, "they would never consent"; I presume you mean, they would be unwilling to assent to such a proposal?—I go further: the remarks I have heard made upon this point by members have been so strong, that I think they would say, they could not consent, and would let things take their course. I do not think they would allow such a body to control within their walls what they consider to be one of their most important functions, and they would far rather submit to have it taken away altogether, and be merely curators of the museum, &c.

1774. Sir *Edward Grogan.*] Has the society ever shown the slightest disinclination to give every facility as regards their theatre or museum, to the professors of the Museum of Irish Industry?—Never.

1775. Is it your opinion that the society would feel that such an arrangement as you suppose, would be both unreasonable and unjust towards them, and that they would decline to be parties to

to it?—I think they would so feel it; that they would feel it to be a very unreasonable arrangement to say, that the educational arrangements within their walls, and under their implied sanction, should be wholly withdrawn from their control. I think they would greatly prefer either of the two courses I have suggested. They would say, "Either let us have a joint Board, or let us be wholly independent; give us a certain number, say two or three professors, and you take the rest, rule yours as you like, and let us rule our own." They would vastly prefer that to allowing an extern body with which they would have no connection, to rule and arrange all those matters.

1776. Is it your opinion that the science education of the people of Ireland can best be conducted by a committee jointly elected, which would give satisfaction to both parties?—If you divide the professors between the two institutions, then that follows as a logical result. I do not say whether it is the best course to divide them between the two; but if you admit the premiss that the professors are to be divided, then the logical result is that you must adopt one of the two courses I have named, namely, either make them wholly independent of one another, each division having its own governing body, or let them be governed by a joint Board, with which each shall be connected; that is to say, some body like the senate of London University, as suggested by Dr. Corrigan.

1777. You have been connected with the Royal Dublin Society for a long time?—For a considerable number of years.

1778. And you are intimate with the members generally?—Very much so.

1779. Are you able to say, of your own knowledge, whether the society attach much value to their educational functions?—I am able to say that they do very much.

1780. Was the principal objection which they made to the arrangement suggested by Professor Playfair grounded on the fact that that recommendation would have tended to deprive them of their educational functions?—I think it was entirely grounded upon the withdrawal from them of the appointment of their professors, and their educational functions.

1781. Would you say that any proposition which should have the same effect would be equally distasteful to them, and meet with similar opposition on their part?—I am sure it would be highly distasteful to them.

1782. You said that, in your opinion, if a new mode of giving scientific instruction to the people of Ireland should be adopted, you would not approve of the supervision of that instruction being placed under committees of the Royal Dublin Society?—Previously to 1854 the arrangement was this: each professor was under his own committee, each committee consisting of 11 members. The committee of chemistry controlled the professor of chemistry, the committee of natural philosophy its professor, and so on; so that you had four professors, with 44 gentlemen controlling them, those gentlemen being subject again to the control of some 30 members of council; therefore, there was a very large body having the management of those educational arrangements which was, of course, open to the double objection that it was necessarily very fluctuating, because they had to be elected each year, and that it was too numerous a body; and it was also open to this objection, that among such a numerous body there would be a comparatively small proportion really competent to control scientific education. In 1854 that arrangement was changed, and the control over these matters was vested in the committee of lectures, a small permanent body selected for their competence to superintend the educational arrangements. I do not mean to suggest that the scientific education should be put under the entire control of the committee of lectures, in preference to any other analogous body. I am only following Dr. Lloyd's suggestion in stating that if it should be decided that it should be wholly conducted in the Royal Dublin Society, it should be under some moderately small and permanent committee.

1783. The Commissioners of 1862 recommend the transference of the educational functions of the Museum of Irish Industry to the Royal Dublin Society; if such a system should ultimately be adopted, have you reason to think that the educational functions of both bodies could be efficiently carried out by the Royal Dublin Society?—I think they could, provided they delegated those functions to a committee moderately permanent, composed of gentlemen selected for their scientific knowledge (I mean by "moderately permanent," not elected for life, but not changing every year), and not too numerous. The committee of lectures are virtually elected every year, and yet there has never been a change in it.

1784. Would you leave to that committee the selection of lecturers and the appointment of professors?—No, I would not. It might not be desirable that so small a body as that should have the selection of lecturers and the appointment of professors. If the appointment of professors were to be restored to the society, I think it ought to be vested in the council, acting perhaps with the advice of such a committee as that.

1785. Are you aware how the professors are appointed in educational institutions in this country; at Cambridge, for instance?—In Cambridge the professors on the subjects cognate to those with which we are dealing are elected by a very large constituency, a body that they call the electoral roll, which is a body numbering about 260 persons; and, singularly enough, that is very much the same number as attends on the average the meetings in the Royal Dublin Society when an election is to take place; for a little exercise of patronage generally attracts a larger attendance.

1786. The gentlemen on the electoral roll at Cambridge elect the professors?—Yes, they elect the professors of mineralogy, botany, chemistry, and the Jacksonian professor of experimental philosophy.

1787. Is that system in force at present?—Yes, under the new constitution.

1788. You are aware that there has been a good deal of alteration in both universities of late years; what you are now describing is the existing system framed in accordance with the recent regulations?—Yes.

1789. If that system has been found to work well in one of the great luminaries of education in this country, can you question its applicability to a similar body in Ireland?—I will not pretend to say that I think the analogy perfect, for this reason; the gentlemen who form this electoral roll are, of course, all gentlemen who have received a university education. It was remarked

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the other day, I think, by Dr. Corrigan, when a similar point was made, that that distinction existed between the members of the universities and the members of the Royal Dublin Society, who were elected simply because they paid their subscription. But, as a set-off to that, I would call your attention to this, that the great mass of those gentlemen on the electoral roll know nothing whatsoever about the particular subjects I have named: the general education at Cambridge is not in those physical sciences or natural sciences, but is in the classics and mathematics, and the consequence is, that these gentlemen who have obtained this qualification as voters on the electoral roll, have attained it through mathematical and classical acquirements; I dare say nine out of ten have not studied botany, geology, or chemistry. But, of course, the fact remains that they are educated gentlemen, and may be supposed to be able, more or less, to form a sound opinion upon the eligibility of a particular candidate to teach scientific subjects. Therefore, I do not mean to say that the analogy is complete; but, still, that is an instance of a large body exercising the function of appointing professors.

1790. That body being one of the highest educational establishments in the country?—Unquestionably.

1791. You have been asked a good many questions in connection with the provincial lectures; from your knowledge of the system, have you any reason to doubt the great value and importance of those provincial lectures, in turning the attention of the young men of Ireland to scientific subjects?—It is quite certain that they do so.

1792. The examinations of the science classes in Ireland have been attended with remarkable success, have they not?—Yes.

1793. Have you any reason to believe that the minds of those students were directed to the subject by your provincial lectures?—I am quite certain that they were; I gave instances in proof of that before the Commissioners, and one instance is so much in point that I may be permitted to refer to it again. A course of lectures was given in Belfast, by Professor Jukes, which opened up the ground for us there. That course was one of the most successful we ever had, and it was given with the special object of being introductory to the science class. I had, at the time, arrangements in hand for the establishment of a science class, and it was part of that arrangement that some eminent lecturer, like Professor Jukes, should go down and draw attention to the subject. Accordingly, Professor Jukes went down, and I think so many as 400 persons attended some of his lectures, and he gave them one or two field excursions to Cave-hill, and so on, in which he was accompanied by a large concourse of people. Many of those who attended his lectures, and especially those who went in for examination, after his lectures, entered themselves on the class roll. Mr. Tate's classes followed on that, and met with the most brilliant success.

1794. The lectures were introductory to Mr. Tate's subsequent labours?—Yes, and designedly intended as such.

1795. And the result was most successful?—Yes.

1796. Are you of opinion that the delivery of lectures by lecturers of celebrity, in any town where science classes shall have been formed, is still the best mode of calling attention to those subjects?—Dr. Lloyd has so stated; and I would respectfully venture to endorse his opinion upon that point.

1797. You have mentioned the names of Mr. Tate and Mr. Dowling; when they first went down to the different towns to become science teachers, they were assisted by a small grant from your committee?—They were.

1798. Ultimately, you had to withdraw that?—Yes.

1799. And you then found some difficulty in inducing those gentlemen to continue the classes?—Mr. Tate continued. Mr. Dowling withdrew, stating that unless he got aid from the committee he would not continue.

1800. The success of the schools was not so great, and therefore the amount of his remuneration was not sufficient to induce him to continue?—Yes. If he had had any reason to suppose that the schools would have continued as successful and as lucrative as they were then, he would, I feel sure, have continued, without regard to aid from the committee; but he naturally thought that the students would not continue to be so numerous.

1801. In that state of things, finding a difficulty in getting certificated teachers, the committee adopted the other alternative, of finding gentlemen who could devote their evenings to scientific instruction, having their ordinary occupations during the day?—The committee have been aiming at that from the first. That is the fundamental principle of the Science Minute; and all along, even while the committee had those two teachers in those schools, I have been always looking out for resident teachers, and always suggesting to the best and most successful of the pupils, that they ought to apply their minds especially to qualifying themselves to become teachers, and to take out teachers' certificates; and I rather think that one of those men who took his certificate in November was one of our prize students in Belfast.

1802. Are you of opinion that the system of provincial lectures, which has been so long carried on by the committee, can be properly considered as antagonistic to your science classes at all, or is it not rather ancillary and subservient to them?—Most unquestionably it is not antagonistic; I do not see how I can doubt that it is really beneficial in that direction, when I have the body of weighty testimony which I have already alluded to, viz., the Royal Society, the British Association, the committee of lectures, and Dr. Lloyd, which coincides with my own experience upon the subject.

1803. You consider that the delivery of lectures in provincial towns by gentlemen of high eminence in scientific branches, is really assisting the local teachers, by calling attention to the subject, and enlisting a number of pupils in scientific studies?—There can be no doubt about it.

1804. The Report of the Commissioners of 1862 recommended a very considerable change in the constitution of the Royal Dublin Society?—It did.

1805. Did the Royal Dublin Society express their readiness to comply therewith?—They did. The society came to a resolution to adopt the change.

1806. We have it in evidence that they did not carry out that change in consequence of a letter received from the Treasury on the subject?—That is so.

1807. As far as you know, are the society quite ready to carry out that change?—They are.

1808. You

1808. You consider that change desirable and necessary?—Yes; I wish most emphatically to state, that whatever determination may be come to in reference to the scientific arrangements, the change recommended in the constitution and power of the council, is absolutely necessary for the good government of the society.

1809. You fully endorse the recommendation of the Commission in that respect?—Yes; I was one of the four gentlemen who prepared the report which originally suggested that change in the constitution of the council. It originated with a report of Captain Donelly, the science inspector, who called attention to certain points in which the system, as at present arranged, seemed to work badly, and said that some change ought to be made. The council then referred it to Sir Richard Griffith, Mr. Senior, Mr. D'Olier, and myself, to review the correspondence, and to consider what was the best course to be adopted. We then prepared a report, suggesting those changes in the constitution of the council which were afterwards endorsed by the Commissioners of 1862, and embodied in their report. Our report, in which that change in the constitution of the council was suggested, was brought before the council, and by them approved of; but it did not come before the society at large. It remained for a while on the table, because it was understood that some investigation was about to take place. This Commission of 1862 was then spoken of; and I think that was the reason why the council did not bring it before the society, as the matter was about to undergo investigation. The Commission of 1862 was held, and the gentlemen forming that Commission considered our report; and they adopted verbatim, I may say, our recommendation for the alteration in the constitution of the council, with one very trifling change that they suggested.

1810. The council agreed to your report, and they were prepared to submit it to the general meeting of the society?—Yes.

1811. Did Mr. Hamilton's letter prevent that step being taken?—No; that step was not taken because it was understood that this Commission of 1862 was going to be issued. That Commission sat, and our report was laid before them. They considered it, and embodied it in their report; and that Commission having reported, we then got a letter from the Treasury, stating that they approved of the Report of the Commissioners, and that they were prepared to carry it out, as a whole, if the society were willing to adopt it. In the correspondence, moved for by Mr. Cogan, will be found the Minute of the Treasury which was embodied verbatim in Mr. Peel's letter to the society. It is to this effect: "And, that my Lords have now directed a copy of the report to be sent to the Council of the Royal Dublin Society, with an intimation that, in concurrence with their Lordships of the Committee of the Council on Education, they have fully considered the recommendations and views contained in it; that my Lords are of opinion that it must be treated as a whole; that they request it may be submitted to the council and to the society; and that in the event of its receiving the approval of the society, and the society being ready to co-operate in the changes, as regards the constitution of their executive body, which the Commissioners propose, Her Majesty's Government will be prepared to take at once the necessary steps to give effect to their recommendations." On the receipt of the letter from Mr. Peel, which is almost in the words I have just read, the council agreed to adopt the recommendations of the Commissioners, and convened a meeting of the society, to bring the matter formally before the general body. The general body met on the 26th of June 1863, when it was resolved, "That the society accepts the Report of the Treasury Commissioners, so far it relates to this society, and is ready to adopt the changes as regards the constitution of its executive body which the Commissioners propose." The words "so far as it relates to this society," were inserted because the report dealt with other bodies, and the Royal Dublin Society did not wish to involve themselves in questions concerning them.

1812. They answered for themselves, that they were willing to adopt the recommendations of that report?—Yes. Then, in furtherence of this resolution, a committee was appointed for the purpose of preparing a draft of the alterations required in the charter, in consequence of the Report of the Commissioners. I was myself one of that committee. I know Mr. Senior was another member, and I think Sir Richard Griffith was the third. I came over with Mr. Maunsell and Dr. Steele to confer with the Committee of Council on Education, and we attended a meeting of the Board, at which Lord Granville and Mr. Lowe were present. There the points were very fully discussed, which required to be embodied in this supplemental charter; we then returned to Dublin, and framed a supplemental charter which was laid before the council at one or two meetings; and by them discussed paragraph by paragraph, and, with certain emendations, approved. A special meeting of the society was then summoned for the purpose of considering it, and, on the day I think previous to that meeting, the letter of Mr. Hamilton was received, in which he requests them to suspend all further proceedings.

1813. Have you any reason to doubt that, except for that letter, the charter containing those alterations in the constitution of the society would have been adopted?—No, because what was done on that letter being read to the society, was this, they came to this resolution: "Resolved, that the Society, while still adhering to its undertaking to carry out the proposed changes in its constitution already agreed to, feels at the same time bound in deference to the wish contained in the letter from the Treasury just read, to suspend taking any steps in the matter until it shall receive a further communication from the Government;" so the matter rests. The result is that the body at large have never yet had before them the supplemental charter.

1814. They have given their sanction to the adoption of such a supplemental charter?—Yes. Some matters of detail, such as, for instance whether all the members were to be elected annually or triennially, may be subject of discussion before the society.

1815. Have you ever known or heard of the Royal Dublin Society being influenced by political or sectarian motives in the selection of its councils, committees, or officers?—Never. I have been intimately acquainted with the society for years, and with the elections of its councils, its committees, and its officers, and I never yet heard such a point suggested.

1816. Or in the management of any of its departments?—

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partments?—Or in the management of any of its departments. I do not believe that such a consideration ever entered into the minds of anybody connected with it.

1817. Sir Robert Kane alluded to a political or sectarian speech being made in the Royal Dublin Society by Professor Haughton; were you present on that occasion to which he refers?—I was.

1818. Were you in the room when Sir Robert Kane alluded to that circumstance?—Yes.

1819. Do you think he was correctly or incorrectly informed upon that subject?—I think he was incorrectly informed upon the subject.

1820. Will you state what the circumstances really are?—If I heard the question rightly, the question under the consideration of the Committee at the moment was, whether the Royal Dublin Society, from its constitution, was not an unsuitable body to have the management of scientific education, inasmuch as the body at large was liable to be influenced by political or religious motives, in interfering with the arrangements of the professors. The question was then put to Sir Robert Kane whether he had ever known an instance of its being so influenced; I understood him to say that he had, and he named this particular instance. I deeply regret to find that he has fallen into such an unhappy mistake (as it appears to me to be) upon that point. The question before the society was not a question relating to the arrangement of lectures or education by its professors, which was the point of the question put to Sir Robert Kane; but the question before the society was Dr. Playfair's minute, which was a minute proposing for the first time to withdraw the patronage and appointment of the professors from the society, which always, up to that time, had appointed them, and likewise to withdraw from them their educational functions and their educational staff. That caused much annoyance to the society. They thought it was depriving them, in fact, of half their existence, and, of course, there was a warm feeling upon the subject. A meeting was convened to consider it. So that, in the first place, supposing anything political or religious, or anything not strictly proper was given utterance to at that meeting, it was not in the smallest degree bearing upon the arrangement of the courses of lectures or the scientific education, which I understood to be the point of the question put to Sir Robert Kane. But, in the second place, I have not the least recollection that Professor Haughton introduced anything political or religious into his speech. He certainly entertained strong feelings against the proposed change; and he had not at that time any great respect for the Museum of Irish Industry; and I daresay he expressed himself somewhat warmly; but as to supposing that he said anything political, or anything religious, I believe it to be an entire mistake. I have no recollection of his having used any such expressions.

1821. The subject under consideration was the proposed change under Dr. Playfair's minute?—Yes; I have here the minutes of the meeting.

1822. Will you read the resolutions?—I will point your attention to one or two of them. The minutes commence with a report of the council, bringing under the notice of the society the letter from Professor Playfair and the Minutes of the Lords of Privy Council, and at the end of it I find it was "Moved by Dr. Harrison, and seconded by Mr. George Alexander Hamilton, That the Report just read be received and entered on the minutes." That was done. Then it was moved by Professor Haughton, and seconded by Dr. Wright, and resolved, "That the society, in adopting the report of the council, desire to place on record their opinion that an institution such as the Museum of Irish Industry, conducted exclusively by officials appointed by Government, cannot efficiently discharge the duties which have been hitherto performed by the Royal Dublin Society, composed as that Society is of members connected with the trade, agriculture, and manufactures of the country." That was the resolution proposed by Professor Haughton, on which some speechifying, very eloquent, and, no doubt, rather warm, took place.

1823. *Chairman.*] Do you agree with that resolution?—I think it is an exceedingly safe resolution, because it is so remarkably general; it does not confine itself to education.

1824. Do you think the Royal Dublin Society, composed as it is of members connected with the trade, agriculture, and manufacture of the country, a better body for the purpose than persons appointed by the Government?—There is not a word about "scientific education" in it.

1825. Sir *Edward Grogan.*] Who was in the chair upon that occasion?—The Marquis of Kildare was in the chair, and the vice-presidents present were the Honourable Judge Jackson, Mr. Kemmis, Mr. George Alexander Hamilton, and Mr. Isaac Weld.

1826. Judge Jackson was present?—Yes; not in the chair.

1827. It was stated to us that there was a distinct resolution passed, that the speech of Professor Haughton be printed and distributed; do you find any resolution to that effect?—All I find is this, "Moved by the Honourable Judge Jackson, and seconded by Dr. Waller, and resolved that Professor Haughton be requested to prepare a statement embodying the substance of the eloquent speech delivered by him this day."

1828. Did you hear that speech?—I heard that speech, and I heard Judge Jackson make that motion.

1829. Did you consider that that speech bore the character of a political or sectarian speech?—No; I have no recollection of any political or sectarian allusions in it. I am only speaking from memory; but from the beginning to the end, it was very much what it is embodied in his resolution, stating strongly his disapprobation of the Museum of Irish Industry, and possibly condemning the mode of working carried on by some of the professors there. I think some disparaging remarks were made by Professor Haughton. It was a moment of excitement, and it is exceedingly likely (I am only speaking from memory) that Professor Haughton, in his speech, may have made remarks disparaging to the Museum of Irish Industry, and to its governing body, and possibly to some of its professors.

1830. Was that resolution of the society rescinded at any subsequent meeting?—No. At the meeting in question a motion was made to this effect, "That a deputation, composed of the vice-presidents, honorary officers, and council, accompanied by such members of the society as are willing to attend, be directed to wait on his Excellency the Lord Lieutenant, in order to represent the unanimous feeling of the society, relative to the proposals of the Board of Trade, and

and to request his Excellency's co-operation;" and then Judge Jackson moved a subsequent resolution to this effect, "That Professor Haughton be requested to prepare a statement embodying the substance of the eloquent speech delivered by him this day." And I remember his saying that the facts and arguments put forward by Professor Haughton in his speech that day would be most valuable as a brief or instruction for the members of that deputation; and that is what makes the thing dwell upon my memory. I remember making the remark, "There is the old judge at the shop still" when he used the word "brief."

1831. Mr. *George.*] Do I rightly understand the substance of your evidence with regard to this transaction to be this, that the account given by Sir Robert Kane of that meeting and of the transactions that took place appears to have been given from hearsay; and that he is in fact mistaken?—He stated that it was upon hearsay. There were no doubt strong and possibly exciting remarks; but that they were of a political or religious character, which was the point under discussion, and which gave the thing its force, I altogether dispute. Before closing my examination I wish to add that there was one suggestion made by Sir Robert Kane with respect to the day and evening classes, which appeared to me to be so valuable that I do not wish to let it pass unnoticed. Sir Robert Kane stated that he thought it would be desirable to have the public lectures delivered altogether in the evening, to attract, as it were, the artisan classes, and direct their attention to the science classes which might be established in Dublin (as already there are one or two) under the Science Minute, and that the afternoon classes might be of a more technical character, they being the paying classes intended for the instruction of those who wish to qualify themselves as teachers, and those who desire a good practical education. I wish to say I think that an extremely useful suggestion, and it gives a definite bearing to the whole system of lectures. The evening public lectures would bear just the same relation to the science classes under the Science Minute in Dublin that the provincial lectures do to the science classes in provincial towns; that is the true function of those public lectures addressed to the citizens of Dublin, and, therefore, it is desirable to have them in the evening when the artisans and operatives, the very persons for whom those science classes were intended, would have the opportunity of attending them. Then it is most desirable to have the paying courses in the day rather than in the evening, and for this reason, that they are attended chiefly by persons qualifying themselves to become teachers, and devoting their time and attention to those subjects; persons who are not merely giving their leisure hours to pick up a smattering of science, but who come to Dublin for a twelvemonth to study closely those subjects, and to qualify themselves to be teachers.

1832. You perfectly concur in that recommendation of Sir Robert Kane's?—Yes; it appears to me to work out the true distinction between the public and the technical lectures, and to put them on a sounder basis than they are now on.

1833. Sir Robert Kane also suggested that the number of public lectures relatively to the systematic lectures was rather too numerous; are you of that opinion?—I am disposed to think that there ought not to be more than 12 non-paying lectures on any subject.

1834. You think that 12 would be quite sufficient, and that the number of systematic lectures should be rather increased?—Yes, I think so. Each professor is bound, by the terms of his appointment, to give 52 lectures. If you took 12 out of that number it would leave 40 for the technical lectures.

1835. You concur in that recommendation of Sir Robert Kane's also?—I do.

1836. You have mentioned in reply to the Chairman that the superintendence and management of the science classes are entirely under your control?—In the way I have stated, the science classes are rather directly under the Department of Science and Art. It is open to them to send over an English inspector if they please.

1837. You are at present the superintending head in Ireland?—Yes, up to this moment; I have been the organizer and superintendent of those schools in Ireland.

1838. You organised them originally in the manner you have described to us, and you have continued up to the present time superintending them?—Yes.

1839. You do not conceive that the occasional visit of a gentleman from England in any manner supersedes your duties?—Not at all. I rather welcome such visits. I think, for the reasons I have given, they are most desirable.

1840. Have the Royal Dublin Society recently organized a new system of examinations?—Yes, they hold examinations for certificates of merit. Once a year, at Whitsuntide, there are examinations held by the Royal Dublin Society for young men desirous to qualify themselves for mercantile situations. We call them examinations for certificates of merit; the examinations are held only on subjects that are useful to such young men; not in any of the sciences we have now been discussing, but in English, spelling, writing, arithmetic (both ordinary and commercial), geography, and history, as being useful to men in mercantile pursuits, book-keeping, and the elements of geometry, and algebra. That is the extreme limit we go to in any of the sciences. They are carefully examined in those subjects.

1841–2. By whom?—By a number of gentlemen: several fellows of Trinity College have acted as examiners. Professor Haughton, Professor Galbraith, and Professor Ingram, have examined several years; I have myself been one of the examiners from the beginning, and some two or three other gentlemen have conducted those examinations all voluntarily.

1843. *Chairman.*] Do you confine yourselves to members of the society?—I do not know whether we can confine ourselves to members of the society, but those gentlemen are members. One or two gentlemen connected with mercantile pursuits have volunteered to act as examiners in book-keeping and commercial matters.

1844. Sir *Edward Grogan.*] How long has this system been established?—This is its sixth or seventh year.

1845. Do you find it a popular system among the young men of Dublin?—Very much so; it is increasing so much in popularity as to become quite alarming. At first there was a small class, that soon rose to 30, after which it rose to 50. Then, about a year and a half ago Sir Robert Peel gave, for a certain number of successful candidates, nominations to some temporary clerkships in the census department, the effect of which was such that 70 came in last year. Then again

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Sir Robert Peel placed at our disposal some nominations for clerkships under the Registration of Births and Deaths Act. There were eight vacancies. The results to us have been most serious, for there were 40 candidates for the eight vacancies, of whom we supplied five, there being 35 against them. Out of the five, three got situations (leaving, therefore, five situations for the remaining 35, or one in seven), one of the others very nearly got it, and another was disqualified by being a year over age. The result has been this, that it has made the thing so popular that I have had a letter from Dr. Steele, saying that up to the present there are 135 candidates, and as they come in to the last moment we shall probably have 150.

1846. Those young men submit to your examinations by way of advancing themselves in life, as they find that that certificate of merit is in itself a direct recommendation to employers of that class of labour?—Undoubtedly. Many have got employment in the Bank of Ireland and in mercantile offices through this certificate of merit given by our society. I mention the results in the case of the nominations given by Sir Robert Peel, in order to show that our examination is really a *bonâ fide* thing, and really a test of merit.

1847. What qualifications or recommendations or testimonials does the society require to admit young men to those examinations, or are they open to all?—They are open to all, and they are not confined to young men, for we have a number young women sending in their names.

1848. It is a free examination, voluntarily submitted to and conducted by voluntary examiners?—Yes.

1849. And the certificate of merit is found to be of the greatest practical utility in advancing those young men in after life?—Yes, and the Royal Dublin Society, out of their own subscriptions, place at the disposal of the examiners 20 *l.* for prizes to the most deserving.

1850. You have given us an instance in which those certificates of merit obtained at those examinations have been recognised by the Government; have they been recognised by any other Department?—At page 11 of the fifth report of the Scientific and Art Department, under the head of "Committee of Lectures," and alluding to the change that had first taken place in the system of examinations which I alluded to in the early part of my evidence (viz., putting them under an examiner distinct from the lectures), the Department say, "Hitherto the examination papers, given out immediately after the delivery of the course of lectures, have been entrusted to the lecturer himself, and the papers afterwards sent to Dublin for examination by professors whose reports are further examined at the Department. The system is open to objections, and it would seem desirable that the lecturer himself should take no part either in the preparation, issue, or collection of the papers. It might also be well worthy of consideration, should the general examinations of the Royal Dublin Society continue to prosper, to connect them in one system with these provincial examinations." That was so long ago as 1858, and they have been prospering and increasing in the way I have told you to this time.

1851. *Chairman.*] Had those young men to whom you had given those certificates of merit, derived any of their instruction from the Royal Dublin Society?—No.

1852. Would you think that the same certificates of merit would carry the same weight with them, if they were to be distributed by means of a central school of instruction such as has been contemplated at the Museum of Irish Industry?—Certainly; but the subjects examined upon are totally distinct from scientific subjects. In those examinations, where certificates are given, there is not a single subject examined upon that is dealt with, or contemplated to be dealt with by the Museum of Irish Industry; those subjects are the ordinary branches of English education, such as are found useful in a merchant's office.

1853. Do you know whether any of those young men who came up for examination were or were not Roman Catholics?—We know nothing whatever about their religion; I should suppose they were; it is open to all, and as they are mostly of the humbler class, I suppose a large proportion of them would be.

1854. Sir *Edward Grogan.*] You know nothing about it, because you never made the inquiry?—No; and in the examination we do not even know their names. The examiner merely says No. 65 answers so-and-so.

1855. I need hardly ask you whether the efficiency of the committee of lectures is not very much limited by the insufficiency of the funds at their disposal?—Yes; we formerly had 900 *l.*; that is now reduced to 500 *l.*

1856. You are obliged to eke out your limited funds in the best way you can?—Yes; in the very first report the committee ever issued they recommended to the department to increase the grant to £1,000. That was before I was secretary, and when I was a member of the Committee—Dr. Ball being the secretary. They say—"The committee was reluctantly obliged to refuse many applications for lectures, in consequence of its want of funds, and such appears to be the desire for provincial lectures that the committee is strongly impressed with a belief that a grant of £1,000, instead of £500, is most desirable with a view to meet this increasing demand."

1857. What is the date of that report?—1854; the first report covered two years. So little was done in the first year that I remember the two years were embraced in one report, and that first report contains the operations of 1854 and 1855; on the title-page it appears to be printed in 1856, it was sent over here in January 1856.

1858. Have you been connected with the committee of lectures from its commencement?—Yes. On the death of Dr. Ball in 1857, I became Secretary.

1859. Have you any reason to doubt that the passage you have read is applicable, only with much stronger force, to the present state of the country?—There is this difference. If 1,000 *l.* were placed at our disposal now, I think it should be applied in a mixed way. I do not think that it would be desirable to employ it in sending out a double number of provincial lecturers, to deliver a double number of courses over the country. We now work our 500 *l.* in the double way; in the way arranged by the minute of 1859, a portion of it, say half, is given to provincial lectures, and the remaining portion to working out the Science Minute. A similar course would be wisely adopted if the sum were increased as suggested by the committee to 1,000 *l.* When we had the 900 *l.* that is what we

we did. The report then goes on to say: "The committee accordingly is anxious to impress upon your Lordship the propriety of an early consideration of this suggestion, in order that, if your Lordships should approve of it, the necessary application should be made to Parliament."

1860. *Chairman.*] You would apply a portion of the increased grant to science schools?—As we did when we had the 900 *l.* We would deliver more provincial lectures. We would not apply the whole 1,000 *l.* to provincial lectures, though we would deliver more than we do now, and we would be able to comply with the request of a greater number of towns. If 1,000 *l.* were placed at our disposal, I think the legitimate way of spending it would be just as we were doing with the 900 *l.*, applying, as the committee saw fit in their discretion, a portion to sending provincial lectures, and a portion to organizing science classes in particular towns.

1861. A portion of the 900 *l.* was applied at that time to paying the three months' teachers, was it not?—Yes; I would not advocate a recurrence to that plan, the necessity for it having died away. We have now six or seven new teachers. The only object of that was to start the thing, when we could not get teachers. I think that a guarantee of that kind would operate disadvantageously. Those who did not get it would be discontented. I do not think any portion of that 1,000 *l.*, if our funds were increased to that amount, ought to be applied to guaranteeing the teachers. I would apply a portion to defray the expense of sending down lecturers, a portion to defray the expense of establishing science classes, and the remainder to defray the expense of examinations, inspections, and travelling expenses, and all the other expenses. At this moment, the committee has 500 *l.* to do everything with: to pay the secretary 50 *l.* a year, and the fees of 2 *l.* a day; to pay the lecturers and travelling expenses, and office expenses. It is, I need not say, absurdly inadequate.

1862. Did the committee wish to substitute a salary for fees at any time?—I have already answered that question in an answer I gave at the commencement of my examination. I referred to a minute signed by the Lord Chancellor, a copy of which I have here. "The committee having taken into consideration the remuneration given to their secretary, and finding that no addition has been made to the annual sum of 50 *l.* for office work, originally given to Dr. Ball at a time when there were no examinations, and when the duties of the office were very much lighter, consider that some increase should be made to this allowance. They also consider that the paying a special fee to the secretary for each of the numerous occasions on which his duties require him to go to the country is objectionable on various grounds, among which it is sufficient to state this one, namely, that it is necessarily left much to his own discretion and judgment to decide the necessity of such journeys. They consider, therefore, that these fees should be replaced by an annual sum based on the amount of fees for the last two years. They find that taking their average for that period they amount, at 2 *l.* 2*s.* a day, to nearly 150 *l.* a year, which, taken in conjunction with the above-mentioned sum of 50 *l.* would make the amount at present paid to the secretary to be nearly 200 *l.* a year. They have accordingly resolved, for the above considerations, to make a slight addition to this sum, and to fix the amount to be paid for the discharge of all duties, both in town and country at a bulk sum of 250 *l.* per annum, to commence from 1st April 1861, and to be paid out of the funds at the disposal of the committee. They request the Lord Chancellor, as their chairman, to transmit this resolution to the department, with a request that if any objection should exist to the proposed arrangement the committee should be immediately informed of it, as they are allocating their funds for the year. (Signed) Maziere Brady, chairman of the committee of lectures." It was also my own wish to substitute a fixed sum for the fees. I said, "Some day or other, some one may object that I am cutting out work for myself; I would much rather you would name something definite, and not expose me to that imputation:" and it was with that view they said, "Let us take the average of the last two years." I said, "I am quite content." They did not increase the amount of the fees, but they increased the payment for the office work, which was 50 *l.* in Dr. Ball's time, to 100 *l.* When the thing was only first started in Dr. Ball's time, the payment may not have been very disproportionate to the work, but that is not the case now that the work has so largely increased. They raised the 50 *l.* to 100 *l.* and made no change in the payment of the fees further than substituting a fixed sum based on the amount of the fees of the previous years.

1863. You stated that you had been connected with the library committee many years?—Yes.

1864. How many gentlemen constitute that committee?—Eleven.

1865. Are you a member of that committee?—Yes.

1866. Will you mention the names of the members of that committee?—The chairman at present is the Rev. Dr. Dickson, Fellow of Trinity College, Dublin; Dr. Ingram, Fellow of Trinity College and Professor of English History, is a member; Dr. Anster, a gentleman eminent in literature, and who is likewise Professor of Civil Law in Trinity College, is also a member; Mr. Dowse, one of the most rising members of the Irish bar, and a most distinguished scholar of Trinity College, is a member. He is a man whose information both in history and English literature, and in popular science, is equal to that of most men I know. Dr. Wright, the lecturer on Zoology in Trinity College, is a member; and Dr. Barker, the Curator of the Museum of the College of Surgeons, is also a member.

1867. Is the attendance of that committee pretty regular?—I should fancy it is the best attended of all the committees.

1868. Do they select the books to be purchased?—Yes.

1869. What is the process of their selection; is any application made to them by the lecturers, or by the heads of Departments; or do they themselves make the selection?—All those courses are followed. There is a book kept in which any member of the society can suggest any book for the consideration of the committee which he thinks desirable; that book is laid before the committee at every meeting; and they also receive suggestions from the professors and lecturers, as to what books should be purchased; and also they frequently receive from Dr. Carte, the director of the Museum, suggestions for the purchase of works on zoology, necessary for carrying on the arrangements of the museum; and the committee also act upon their own responsibility.

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sponsibility. Many of the members have their own peculiar pursuits, and are therefore conversant with the literature of that branch to which they devote themselves. Dr. Ingram, for instance, is professor of English History, and he very constantly suggests books connected with that subject. Dr. Anster, who is also a member of the committee, and who is a man of great literary reputation, is very familiar with general literature; and there are several scientific men on the committee who are conversant with the literature of their respective branches of science.

1870. Do the society entrust absolute power to the library committee to select any books they please, or is their choice limited to books on scientific subjects only?—No. It is not limited to scientific subjects only; but controversial or theological, or professional books, such as books on medicine and law, are not allowed to be bought. Civil engineering we consider as coming partly under that denomination. We should not generally buy books of a practical character, such as every civil engineer ought to have, though we have purchased some books on civil engineering, inasmuch as it may be considered to be a subject of general interest, and not like law and medicine, which are wholly professional.

1871. Is it to meet the requirements of the professors of the different departments that those books are selected generally?—The primary object which the library committee have had in view has always been to make it rather a scientific than a popular library. The library was founded in connection with our museums and gardens, and to supply the professors with the works requisite for their several departments—many of them of a very costly character. The sum at the disposal of the committee for purchasing books is very small, and in fact only half what it seems to be. There is 500 *l.* at their disposal for the purchase of books, and the binding of books. This latter item comes very heavy. A few years ago we had a gift, which Sir Charles Trevelyan likened to the gift of a white elephant, for it nearly ruined us. I mean the gift of the specifications of patents, on the condition that we should keep them bound, and accessible to the public. The result has been that it has cost us, up to the present time, 100 *l.* a-year, on the average, for binding those patents.

1872. *Chairman.*] Are those much referred to?—The library clerk tells us that they are referred to very little indeed. The cost of binding was found to be so enormous that the committee and the council said, "We cannot continue spending so much in binding;" and reference was made to the library committee, to see whether something could not be done to reduce the expense. They had the matter under investigation, and considered the question, whether the mode of binding should not be altered. The librarian thought it a pity to break the series and alter the mode of binding, but, after a long debate and discussion, and preparation of estimates, and conferences with the binder, we were driven to this—to alter the system of binding. For instance, the maps, which were up to that time mounted on linen, we were obliged to give up mounting, and we were obliged to practise economy in various other ways, such as binding two volumes in one, whereby about half the expense was saved. Still the expense is very heavy. The cost has been 800 *l.* or 900 *l.* up to the present.

1873. Sir *Edward Grogan.*] Were any conditions attached to the handing over of those specifications to you?—That we should keep them at all times accessible to the public. We have to bind them, for they only come over to us in sheets; besides which, we have to be at the expense of making suitable cases for them; we have spent 40 *l.* or 50 *l.* more for cases to hold them. They are going on increasing so rapidly that we have constantly to lay out money for cases. And after all there remains the general binding of the library, which is far more important, and yet we are not able to devote to that nearly the same sum that we devote to the binding of the specifications.

1874. *Chairman.*] Did you bring the infliction of those specifications upon yourselves?—I am not aware; perhaps we undertook the responsibility, not being aware what a costly gift it was going to be. We ought to have a very considerable sum at our disposal for the binding of the large number of books which come to us in paper covers and boards, which go to pieces very soon. We have not been able to apply to the binding of those books a sum equal to more than half that which we apply to the patents. Then comes another branch of expenditure, viz., the periodicals. We have a most valuable collection of periodicals, which we have kept up for many years; I mean scientific periodicals, standard reviews, and scientific journals, of which we have one of the finest collections in the kingdom. Those cost us about 100 *l.* a-year. If you subtract that and the expense of the binding, which are stated things, from the sum of 500 *l.* allocated to the library, you do not leave more than about 250 *l.* a-year for the purchase of books. That is far too small, even for the merely scientific books requisite in order to keep up the character of the library as a scientific library. We are not able to keep up the library in its necessary completeness, even as regards the requirements of our botanical garden and museum; and, as an instance of that, I may tell you that we constantly receive applications from the Director of the Museum, from the Professor of Botany, and from the other professors, for expensive books, which of course they cannot be expected to buy out of their private funds, and which applications we are unable to comply with. The other day we had an application from Dr. Harvey to supply him with two books on botany, which he required for his lectures, and we were quite unable to comply with it, our funds being exhausted, and at length we had to compromise the matter by going into debt for one of the books, and postponing the other *sine die.*

1875. Sir *Edward Grogan.*] You were not able to buy the second book, though the Professor declared it to be necessary for his course?—I do not say that he declared it to be absolutely necessary for his course; he said it was a book which he ought to have. His application for it was seconded by Dr. Wright, both being very competent to give an opinion upon the question.

1876. The selection of the books comes under the supervision of the library committee?—Entirely.

1877. The library committee are selected by the society at large on the supposition that they are gentlemen conversant with the literature of the subjects to which they have devoted their attention, and they are in every way competent to discharge the duties which they so undertake?—Undoubtedly; that is why they are selected.

1878. In your opinion, could any body more competent be selected?—I am not aware that they

they could take more pains than is taken in the selection of the library committee. Whenever a vacancy occurs the library committee very carefully consider the names of eligible persons, and pick out a man who they think is peculiarly conversant with any particular subject. They say, "We want a man who is conversant with the literature of such-and-such a subject, let us recommend him to the society as a member of the committee." One of the witnesses, in speaking about the character of the books purchased by the committee, suggested that they were liable to be influenced by sectarian motives; the society being all Protestant, or something to that effect; and it was suggested that loyalty to the House of Hanover was one of the points insisted upon in the original Charter, and that that might be supposed to give an objectionable cast to the committees of the Royal Dublin Society. Sir Bernard Burke was a member of our library committee, and we were very glad to have him, but he was unable, from the pressure of his other duties, to attend. Another gentleman, eminent in literature and of the same religious persuasion, was proposed to fill a vacancy on the committee, and would have been returned, only that a friend of his on the committee stated that he was going abroad for two or three years, and could not attend. I mention this to show that political or sectarian considerations never influence the committee. They select the name they think most desirable, and send that forward to the society to put to the vote. That does not hinder the society from voting for anybody else if they prefer it; but the one selected is generally chosen. Some remarks were made about the class of books that we have purchased. One principle that guides us in the purchase of our books is, we consider that books written by Irishmen have a peculiar right to be placed in that library, and we have acted upon that principle. For instance, though our rule is generally not to purchase books on medicine, yet we have purchased "Dr. Graves' Lectures on Clinical Medicine," and "Stokes on Diseases of the Chest," because those books are written by Irishmen. It has been generally considered that every Irish book ought to be there, so that foreigners wanting to refer to an Irish book might know where to come for it. We have acted upon that principle even in the purchase of historical works, and, in so doing, I dare say we have purchased books which would almost come within the prohibition, as being books of theology; but we have been rather careful in that way, and just to show how anxious we are to avoid any charge of showing a sectarian or religious bias in the purchase of books, I will mention one or two books which we have, and then one which we have not. We have among our historical works, "Madden's History of the Penal Laws against Irish Catholics;" and "Madden's Lives of United Irishmen;" we have also, "Cardinal Wiseman's Recollections of the Last Four Popes." Those two books of Dr. Madden's are books which some might object to, but they are written by an Irishman; and we got the other book because we considered some of our members would like to have it. We have excluded one book of the highest reputation, namely, the recent edition of the work of Dr. Lee (one of the Divinity Professors of Trinity College), on Inspiration, though it is an Irish book, written by an Irishman, which, therefore, according to our rule, we are entitled to get, but which we excluded lest some might take offence at it.

1879. Sir *Edward Grogan.*] What facilities are given to the public for the use of the library?—Any person who gets a docket signed by a member is at once placed on the list of readers; that is the form which a member has to sign (*handing it in*). *F. J. Sidney*, LL. D. 12 May 1864.

1880. Substantially, is it a free library?—I consider it so.

1881. Is the library open every day in the week?—Every day, except Sunday, from 11 to 5; and for three days in the week it is open in the evenings.

1882. It has been stated, in evidence before this committee, that it could easily be opened during the three remaining days of the week, if you had funds to pay for the necessary gas and attendance?—That was the desire of the committee. I do not know whether or not a suggestion was made that it should be kept shut for one night, for the purposes of cleaning; but it has been the desire of the committee to open it every evening in the week, if they could.

1883. Was there a recommendation of the Department of Science and Art, with regard to opening it on all the evenings in the week?—Yes; that it should be open in the evening for the public, reserving the daytime for the use of the members.

1884. The members have not thought fit to take advantage of that recommendation; they have not excluded the public during the day?—No, it is open to the public whenever it is open to the members.

1885. To all intents and purposes, is not the library as free as the British Museum?—Yes, I never heard of any one who wished to get admission finding any difficulty. A person who wishes to obtain admission goes to the librarian, or comes to the secretary, and he is shown a list of members, and he gets admission without any difficulty. Mr. McEvoy said he had never heard of an instance of anyone finding any difficulty in procuring admission.

1886. In the application made to the Government for aid, 1000*l.* was put as the estimate of what would be required to enable the Royal Dublin Society to carry out their wishes, with regard to the shelving of the library. A grant of valuable books has been lately made by Dr. Joly; would the 1000*l.* cover the cost of the requirements for the arrangement of those books?—No; the gift of the Joly library was subsequent to that estimate being prepared. A separate estimate has been made for the accommodation of the Joly library by the Board of Works, amounting to 400*l.* or 500*l.*; that estimate has never been presented to Parliament, and the society have never received any money for that shelving, therefore they have placed the Joly library in two rooms that they had fitted up for the books of their own library, one of which had been already allocated for the Natural History library, and the Natural History books had been placed in it, but they have turned out the Natural History books, and substituted the Joly books. In addition to that, out of their own members' subscriptions, they have paid the sum requisite for completing some alterations that were required in the shelving. The Joly Library consists, I think, of about 15,000 or 16,000 volumes, and, besides that, there are 10,000 valuable prints; some of them exceedingly valuable. Cases were required for putting those prints in, and on an application coming before us recently to do something about those cases, the library committee,

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in conjunction with the council, decided on applying some of the general funds of the members, to the procuring of some kind of cases, rather than wait any longer.

1887. To enable the public to benefit by the liberal gift of Dr. Joly; otherwise these valuable engravings could not be exhibited?—Yes.

1888. Is there any room appropriated to the readers as there is in the British Museum?—Yes.

1889. Those who visit the library can call for any book they please, and have the use of it?—They can, and that public room was fitted up and furnished in like manner entirely as far as I can recollect, though I am not quite certain as to that, out of the subscriptions of the members, and not out of any Government grant.

1890. Does providing the necessary accommodation in that room form any part of the estimate sent in to the Government?—It was intended to be included in the 1,000 *l.* That estimate was made on the most economical scale. I went through the library at the British Museum the other day inspecting their arrangements through the courtesy of Mr. Jones, the assistant librarian, and I carefully examined the style of shelving, which they consider necessary for the due protection of the books. If we adopted that style in the Royal Dublin Society, which of course we ought to do if we had funds to admit of our doing so, instead of 1,000 *l.*, we should have made our estimate nearer 5,000 *l.*

1891. You say that the library may more properly be called a scientific library than anything else. If it were determined to make it a popular library, and to be open to the public at all times, could you do that with the funds granted to you?—The funds granted to us would be perfectly inadequate; we would have everlasting complaints that our books were not suited to general readers. Altogether we have at present only about 200 *l.* or 300 *l.* each year for the purchase of books. "Gould's Birds of Australia" cost us 90 *l.*; we had to pay 60 *l.* for a botanical work, and the books lately required by Dr. Harvey, will cost us 40 *l.* We endeavour not to confine our library to scientific works, but to purchase also books of general interest, such as books of travels and historical works: it may be said to have somewhat of the character of a general library, as well as a scientific library; but to open it as a purely public library suitable to the reading public of the humbler classes unless you gave us a large increase of grant, would be quite out of the question.

1892. Objections have been made to the rule adopted in the society of lending out books to members, whereby it has been urged, individuals might be inconvenienced when they came to any particular book. Do the society attach any great importance to the continuance of that privilege?—Very great.

1893. Is it one of the leading inducements to persons to join the society?—It is almost the only personal privilege left the members. I have myself brought many members into the society; members of my own profession and others, and I can say, so far as my experience is concerned, in every single instance the motive that has weighed with the gentlemen I have brought in, has been that privilege of borrowing books. I may also add, that within the last two or three days, since it has got wind that some attempt might be made to remove that privilege, I have had a number of letters from persons connected with the society, objecting to its removal, and saying that it was on the faith of the continuance of that privilege that they joined the society.

1894. Have you any reason to apprehend that many persons would withdraw from the society, if that privilege were withdrawn?—Many might. I am certain that it would be a most fatal check to the further increase to the number of members of the society.

1895. Evidence has been given as to a similar practice prevailing in an extensive library on the Continent. Are you aware of any similar privileges existing in any library in this country?—I may instance the library of the Royal Irish Academy in Ireland, which is an analogous institution, supported by a Government grant, and in which the members have the privilege of taking books home, a privilege which, it is considered, gives the library its principal value.

1896. That library consists of scientific books?—Yes, nearly entirely of scientific books; but it has also books relating to Ireland. Then there is the University Library in Cambridge, which is a lending library; and Dr. Lloyd, who has just returned from Cambridge, and is himself a Master of Arts of that University, tells me that, in conversation with the heads of the Colleges there, they mentioned to him the other day that it is what they look upon as the best and most useful feature in that library. It perhaps may strike some members of the committee as novel to hear that the library, which we look upon as the greatest library in the world, namely, the British Museum, is virtually one of the greatest lending libraries in the world; I mean so far as it regards the bearing of its arrangements upon the convenience of the public generally, it may be considered analogous to a lending library. The rule prevails there, that a reader who wishes to make use of particular books may monopolize them for his own use.

1897. For what length of time?—There is no limit. There is a special closet where books are laid by from day to day for readers. No one else can take them if the person who has had them put by comes within a reasonable time after the opening of the library. He may take a particular book, and another person may come for that book for four months together and not be able to get it. I asked Mr. Jones, the assistant librarian at the British Museum, "Do you put no limit as to time?" "None," he said, "the only practical limit is this; once every four months we clean our rooms, and the library is shut; and then, all the books are restored to their shelves."

1898. *Chairman.*] If the person is not actually using the book at the time, cannot another person, who applies for the book, have it?—If the reader is not using it, that is to say, if he does not come within a reasonable time after the library opens in the morning, then another one can have it. It appears by the return of the library of the British Museum for the last year, the number of books so reserved in closets, in which books are kept from day to day for the use of readers was 173,183.

1899. Sir *Edward Grogan.*] Those were books belonging to the general library, appropriated to the use of particular parties studying particular subjects?—Yes; if I am making use of a book, I can keep anyone from using that book, unless I neglect to come for the book within a reasonable time after the opening of the library.

1900. Mr. McEvoy stated that, on asking for a certain

a certain book at the library of the Royal Dublin Society, he found that it had been taken away; do you know the circumstances connected with that case?—I have here the explanation of the librarian of that case.

1901. Was the case inquired into at the time?—Yes.

1902. Will you state the circumstances?—The case was brought before the notice of the society, I think, by the very member who accompanied Mr. McEvoy to get the book for him, and who found it was out. A number of charges were brought against the librarian by that gentleman, in a motion which he brought forward, and which was referred to the library committee, who called upon the librarian to give explanations. With respect to this particular case, the librarian makes the following explanation: "The editor of the 'Dublin Medical Press,' a periodical subscribed to by the society (the office of which is within pistol-shot of the gate), between four and five o'clock, requested a loan of the Vaccination Bill, as it could not be procured from Mr. Thom, or from any other publisher in Dublin; this was on Saturday, March 28th; the loan was asked from the close of the library that evening until its opening on Monday morning. It was stated to be necessary to prepare an important article, which otherwise must be omitted from the number published on the following Wednesday. The librarian, after much hesitation, ventured to lend it, believing that had the same request been made to the committee, it would have been granted; and one member of the committee, to whom it was mentioned, expressed his opinion that the loan was proper. The book was not returned exactly at the opening of the library, but early in the day, as can be certified by one of the members, Dr. Barry, who came to look for it. It did arrive as Dr. Barry was leaving the library, and he used it."

1903. Sir *Colman O'Loghlen.*] Were you here when Mr. Maunsell was examined?—Yes.

1904. Do you recollect his stating this, "The committee of 1836 made a variety of specific recommendations, every one of which, I believe, except one or two matters of minor detail, which altered circumstances have rendered unnecessary, have been carried out?"—I think I heard him state that.

1905. You have for a long time been a member of the library committee?—I have been a member of it almost ever since I joined the society.

1906. I find this passage in the report of the committee of 1836, with regard to the library: "With regard to the propriety of allowing books to be lent out of the library to members, various opinions have been expressed, and there is much weight in the arguments advanced in favour of the practice as well as against it. Upon the whole, however, your committee are of opinion that the disadvantages arising from the practice outweigh the advantages which result from it. It tends to the injury, and sometimes the loss, of the books lent out. It induces members of the society to desire the introduction of works into the library of that light and amusing description which is naturally most agreeable to their families; and it subjects to disappointment those who may be anxious to consult a particular work in the library at the moment when it is at the house of a member. In special cases, perhaps, it would be expedient that the council should exercise a discretion as to the propriety of lending out a particular work; but if the practice be permitted at all it should only be upon a special application in each individual case to the council." That is the present general statement, and I find the following unanimous resolution: "That books should not be lent out of the library, and that, for the convenience of persons desirous to consult the books in the library, a reading-room should be appointed, to which persons, not belonging to the society, should have access by special permission of the council." Were you aware that the committee of 1836 passed an express resolution that books should not be lent out?—No; I cannot say that I was.

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1907. You stated that there has been a reading-room opened for persons not members of the society?—Yes.

1908. For how long has that been open?—About three years; we had no room till then. It was only when the rooms of the museum were given up to us; when the new museum was built for the zoological collection, and we got one of its rooms.

1909. Supposing the arrangement to be still retained, in opposition to the recommendation of the committee of 1836, of lending out books, do you think it advisable that any change should be made in the present system of lending them out the moment after they leave the conversation room?—I have no doubt that the suggestion that a certain period might be allowed to elapse before books were allowed to be borrowed, say, three or six months, would be received with the greatest respect, and acted upon at once by the society.

1910. With respect to the library itself, are you aware that the committee of 1836 made this recommendation also: "That, in the opinion of your committee, the library of the Dublin Society ought to be considered as intended not solely for the advantage of the comparatively few individuals who belong to the society, but as a national library, accessible under proper regulations to respectable persons of all classes who may be desirous to avail themselves of it for the purpose of literary research. With this view they would recommend, that arrangements should be made by the council for allowing to the public at large the same facilities for study which are provided at the British Museum." I believe that admission can be obtained to the British Museum on the recommendation of two householders?—A recommendation from two householders is required; but that must be laid before Mr. Panizzi for his approval. I was asking particularly about that the other day, and I find that they exercise a very stringent supervision to see who it is who makes that recommendation. I said, "Supposing a greengrocer, residing in Drury-lane, styles himself a householder, would you admit a person on such a recommendation?" And they said, "We should feel ourselves exceedingly slow to take such people as that, as persons qualified to give a qualification to read in our library."

1911. Are you aware that the committee of 1836 also recommended, "That whilst upon the one hand no works of a light or trashy description should be admitted into the library, so on the other hand the selection should not be too rigidly confined to works of mere science; but that books containing solid and substantial information upon every

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every branch of knowledge might find a place there with propriety"?—Yes, I am; and on the authority of that, as far as the funds would allow, the committee have purchased books of a solid and substantial class, such as history, biography, travels, and works of general interest.

1912. Mr. *Lefroy.*] With reference to the evidence given by Sir Robert Kane, as to Mr. Haughton, and which has been alluded to to-day, are you well acquainted with Dr. Haughton?—Intimately.

1913. Is he a gentleman who, you would suppose, on any occasion would allow his temper or his feelings so to run away with him as to express himself in any way that would be unworthy of himself, or injurious to any society with which he was connected?—I never heard him say anything savouring of political or religious considerations in the society, or in any places of that kind, where such matters ought not to be put forward. He is a staunch friend, and an uncompromising opponent. He does not spare the lash where he thinks it is deserved; but as to saying anything unworthy of himself, or introducing political or religious considerations where they were not applicable, such as in scientific matters, I never heard him do it.

1914. Did you hear what Sir Robert Kane stated with respect to the conduct of Professor Haughton on that occasion?—I heard all that Sir Robert Kane said.

1915. Do you recollect that Sir Robert Kane stated as his reason for the observations he made with respect to Professor Haughton's speech and conduct that he did so because he thought "there would be a danger that the confidence of the public in the system of education would be very much shaken by anything that might occur at meetings of the society, or by hasty expressions of opinion by members of the society. I do not think that the society would be permanently affected, but the society might be for a time affected. In the instance I mention, the society was affected for a time." Were you present on that occasion?—Yes.

1916. Did you hear Professor Haughton express himself in any manner that would be likely to reflect injury upon the society on that occasion?—I can only say as I have already said that it was an occasion of great excitement, and possibly many remarks were made by Professor Haughton, and probably also by others, rather disparaging to the Museum of Irish Industry, and to persons connected with it. I think it is to be regretted that an occasion should have arisen calculated to call forth strong expressions of opinion; the feeling then excited, has pretty well died out, and I am sorry that the matter has been reopened.

1917. He says, "I have known Professor Haughton to excite in the society most fatal discussions by his speeches, in which other scientific men were attacked, and in which lectures that were going on, were commented on;" have you ever known him do so?—I have not; I am not aware what he alludes to.

1918. Are you aware that Sir Robert Kane stated, that in the instance he referred to, "so entirely was the Royal Dublin Society carried away by a violent speech of Professor Haughton's, that a resolution was proposed, that the speech be entered upon the minutes of the society, and printed at its expense, and that motion, on being put from the chair by Judge Jackson, who was in the chair, was carried unanimously. When the society had time to think of it, it saw that Mr. Haughton's conduct had been most improper; that the subjects he introduced were utterly uncalled for, and that the society had acted most injudiciously in passing him a vote of thanks"?—I believe that to be an entire mistake; I have already explained the motion of Judge Jackson with reference to that; that the facts and arguments Professor Haughton had used in his speech would be useful as a brief or instruction for the members of a certain deputation. So far as I am aware (and Dr. Steele tells me that such is the case), that resolution never was rescinded; and as to the motives that Sir Robert Kane assigns to the society for this supposed rescinding of the minute, I think they are quite visionary. He states, that the society saw that Mr. Haughton's conduct had been most improper, and that the subjects he introduced, were utterly uncalled for, and that the society had acted most injudiciously in passing him a vote of thanks, and passing a resolution that his speech should be printed and distributed; and that at the next meeting, they rescinded that resolution. I believe that there is not a single iota of foundation for that statement. I desire to add, that Sir Robert Kane has long been a friend of mine, and from the high opinion I have of his straight-forwardness and honour, I am quite convinced that he has been grievously misled by some one in the matter. He states that he was not himself present, and everything he has stated, he stated from hearsay; he has been misinformed, for he is incapable of misrepresenting anything of the kind.

1919. Are you aware that he further stated, that the speech which Dr. Haughton made, "was universally spoken of both at the Society and out of doors, as having been a very violent and intemperate political and religious speech"?—I never heard of that; I do not think that it could ever have been so spoken of, from my remembrance of what it was.

1920. Did he make "very strong personal attacks upon the individuals connected with the museum"?—I have already stated that it is extremely probable that he made remarks disparaging to that institution and the gentlemen connected with it; but that is not political nor religious; it was an occasion of great excitement. Not only Professor Haughton, but the members of the society generally, considered that there was an attempt at encroachment being made upon them; an attempt to deprive them of what they considered one of their most important functions, namely, their educational functions, and thereby endangering their very existence.

1921. From your knowledge of Professor Haughton, as a most distinguished and able man, you are willing, as I understand, to bear your testimony that you do not think he could have been guilty of the charges brought against him by Sir Robert Kane, or have exposed the society to the danger to which Sir Robert Kane thinks he did expose it?—I think not. I may also state that, so far from Professor Haughton being likely to be influenced by any religious motives in reference to any attack he may have been supposed to have made upon the Museum of Irish Industry, I know that some of the professors connected with that institution, with whom he is most intimate, are gentlemen of the Roman Catholic persuasion.

JOSEPH BEETE JUKES, Esq., M.A., F.R.S., was called in; and Examined, as follows:

J. B. Jukes, Esq., M.A., F.R.S.

12 May 1864.

1922. *Chairman.*] You are the Local Director of the Geological Survey of Ireland, and Lecturer on Geology at the Museum of Irish Industry?—I am.

1923. What is the date of your appointment?—When my predecessor, Dr. Oldham, became superintendent of the geological survey of India in 1850, I was appointed (in the November of that year) to succeed him as local director of the survey of Ireland, and in 1854, on the completion of the Museum of Irish Industry, I was appointed lecturer on geology at the Museum of Irish Industry.

1924. What do you consider to be the connection between those two appointments?—I will give an answer to that question as briefly as I can through the means of extracts from official documents, showing that the geological survey, the museum, and the lecture system, are all connected parts of one plan, that they originated in England, and were extended to Ireland for the benefit of that country, and that they originated long before any time I have heard stated during this investigation as the time of their origin. The first series of extracts I should like to read are from the Treasury Minute, dated 27th December 1844, which we find copied into the official letter books in the museum in Dublin, and the museum in Jermyn-street. The extracts are these, "Sir Robert Peel states to the Board that various representations have been addressed to him as to the importance of effectually prosecuting and completing a geological survey of Great Britian and Ireland, and that upon communication with persons, the most distinguished for their geological knowledge on the one hand, and with the Master General of the Ordnance on the other, he is confirmed in the opinion that a geological survey has no direct connection with the survey conducted by that Board; that it appears more advisable that the conduct of it should be withdrawn from the Military Department, and separately conducted in direct connection with the Museum of Economic Geology." The Minute then goes on to state that, "My Lords agree in the view which Sir Robert Peel has taken of this subject, and that it will be necessary to add to the estimate such sums as may be necessary to provide an adequate building in London and Dublin respectively, calculated at once to afford facility for inspection by the public," and "ready means of information to those engaged in scientific pursuits." It then directs a communication to be made to the Chief Commissioner of Woods and Forests, asking him to undertake the proposed duties. The Chief Commissioner of Woods and Forests was then Lord Lincoln, now Duke of Newcastle, and he writes, in answer to that communication from the Treasury, a long letter, dated January 13th, 1845. I have extracted from that letter, which is likewise copied into our letter books, the following passages, which bear upon the subject now under investigation; "I beg leave to assure your Lordships in reply, not only of my willingness, but of my earnest desire to carry out the intention of Her Majesty's Government in this matter. * * * The geological survey of Great Britain, as your Lordships are aware, originated in the year 1832, in an offer of Sir Henry De la Beche to supply the data for colouring geologically certain sheets of the Ordnance map of England. * * * A sum of 300*l.* in aid of this service (Sir H. De la Beche contributing the remaining and the greater portion of the expense) was charged against the (Ordnance) survey of Great Britain, in that year; and subsequently the survey has been extended, under his direction, over other portions of the country." The letter then goes into details about the proposed management of the survey, and so on; and then occurs this passage, "It affords me great pleasure to find that your Lordships are disposed to give increased efficiency to the Museum of Economic Geology, in Craig's-court, which was founded in the year 1835, in connection with the geological survey of Great Britain," and it goes on to speak of its having "the twofold object of aiding and receiving aid from the geological survey." In treating of Ireland, the letter first alludes to the report made to Sir Robert Peel by Mr. Young, Captain Boldero, and Lord Adare, laid before Parliament in 1844, and concurs with their recommendation, that "the topographical geology of Ireland should be committed to Sir Henry De la Beche, as general director of the Geological Department of the whole empire;" and subsequently adds, "I enter entirely into the views which suggested your Lordships' Minute of the 27th ultimo as to the establishment of a Museum of Economic Geology in Dublin. I feel assured not only that the existence of separate institutions in London and in Dublin will be a source of many positive advantages to both, but that the utility of such institutions is very mainly dependent upon their extension into different localities, the expansion of their stores from local sources, the discovery of new agencies, and the interchange of views and opinions, whether of local origin or otherwise, the existence of which cannot fail to elicit general results and to promote the cause of general science. It is upon these grounds that, looking to the institution already established in London as the model of that proposed to be founded in Dublin, I should nevertheless desire to see it placed under a superintendence in a great measure distinct." The letter then goes on to mention Dr. (now Sir Robert) Kane, as having, in the Report of 1844, "attached the highest importance to the establishment in Dublin of a central Museum of Economic Geology like that in London," and suggests that he (Sir Robert Kane) should be consulted as to his "willingness to take upon himself the chemical section of the geological survey, under the direction of Sir H. De la Beche," or as to "his position, duties, and emoluments under the proposed arrangement," before he (Lord Lincoln) can advise their Lordships as to the expense of maintaining an institution in Dublin, "which, though founded on the basis of the museum in Craig's-court, may from local causes only require a somewhat different treatment." He adds that it would afford him "sincere pleasure to be enabled, in these communications, to lay the basis of an arrangement for the working of the respective institutions in London and in Dublin, in accordance with each other and with the great public objects which have suggested their establishment." In July 1845, an Act of Parliament (the 8 & 9 Vict. cap. 63) was accordingly passed to facilitate the completion of the geological survey of Great Britain and Ireland.

Martis, 31° die Maii, 1864.

MEMBERS PRESENT:

Mr. Dillwyn.	Mr. Lefroy.
The O'Conor Don.	Sir Colman O'Loghlen.
Mr. George.	Sir Robert Peel.
Mr. Gregory.	Mr. Waldron.
Sir Edward Grogan.	Colonel Luke White.

WILLIAM HENRY GREGORY, Esq., IN THE CHAIR.

JOSEPH BEETE JUKES, Esq., M.A., F.R.S., called in; and further Examined.

J. B. Jukes, Esq. M.A., F.R.S. 31 May 1864.

1926. *Chairman.*] THE question I put to you at the last meeting of the Committee, was what you considered to be the connection between the two appointments you hold as local director of the geological survey of Ireland, and lecturer on geology at the Museum of Irish Industry; you were giving an answer to that question, did you finish that reply?—Not quite; because at the commencement of it I undertook to show that the geological survey and museums of London and Dublin, and the lecture system in London and Dublin were all connected parts of one original plan. I gave extracts from official documents as regards the geological survey and museums, and I now wish to show that the lecture system also was a connected part of that plan. First of all, I would point out the fact that a lecture theatre formed part of the original design of the museum buildings in London and Dublin; and, secondly, I would quote from the inaugural discourse of Sir Henry De la Beche, given on the 6th November 1851, when the lecture system was commenced in Jermyn-street. The quotation is this, "That this establishment should be the means of affording instruction in a particular direction, an instruction tending more especially to illustrate the application of geology, and of its associated sciences, to the useful purposes of life, was early decided. In 1839, four years after the first collections were made for the Museum of Practical Geology, the sanction of the Treasury was given to lectures having that application for their object. The system of instruction we commence this day is therefore not founded on any new view; 12 years having elapsed since lectures of a similar general character were authorised. That these lectures have not been given has arisen from the want of a proper theatre in which to deliver them, and from the absence of other appliances, not until now at our command." I would also state, that when in 1850 I went over to Ireland to take the local directorship of the geological survey, it was upon the understanding that as soon as the museum was completed and the lecture theatre built and arranged, I should receive the appointment of lecturer on geology to that museum, in the same way that my colleague, Professor Ramsay, the local director of the Great Britain survey, received a similar appointment when the Jermyn-street Museum was finished, and, accordingly, in 1854 when Dr. Playfair came over I received the appointment.

1926. Do you consider that the two appointments clash in any degree with one another?—Not at all; I find that since I have been lecturing in the museum at Stephen's Green, I am better able to direct the operations in the field, because one requires to systematise one's knowledge, and to make it definite in order to lecture on it. There are always little shaky points in a man's knowledge, matters which he fancies he knows all about, but which when he comes to explain them to other persons he finds he does not know so well. On the other hand, it is obvious that the best man to give lectures on practical geology is the man who is constantly at work, superintending practical operations in the field, and coming to the lecture room with the fresh observations that he has made every year.

1927. Was there any desire expressed by men eminent in science, in Ireland, for an extension to that country of a school of practical science?—I should say, certainly, there was; in proof of which I would quote from the presidential address of Dr. Apjohn, given to the Geological Society of Dublin on the 10th of February 1841. He being president of the Geological Society of Dublin, made the usual presidential address, and I will read the following passages from it. He first of all quotes from the presidential address of Dr. Buckland to the Geological Society of London, who speaks of the establishment of the Museum of Economic Geology in London, and he then goes on to say, "This passage, I can truly say, I have read with great pleasure, though not without emotions of a different kind." We all "hail with gratitude, and with confident anticipations of great advantage both to science and the arts," the establishment by Her Majesty's Government of such an institution. But is it unreasonable to inquire, why nothing of the kind has been attempted for Ireland? England is a rich, Ireland a poor country (I do not now speak of soil). Is this any reason why we should not have the benefit of a museum of economic geology"? He says, in another passage, "We have also mines in Ireland, and have begun to work them too, and with considerable profit; but we certainly cannot pretend to that dexterity and skill in this most important branch of industry for which the miners of Great Britain are proverbial. If, then, it be decided, and decided wisely, that the Cornish miner may be materially benefited and improved by resorting to the museum, and to the laboratory of the Institution for

for Economic Geology, it surely will not be denied that those who in Ireland are engaged in the same pursuits would derive from such sources a more than proportionate amount of assistance. Why, then, I would ask, have we not in Ireland some institution analogous to that recently established in London, and which, in the opinion of the best judges, promises to ameliorate the condition and augment the resources of the happiest and wealthiest nation in the world"? He then, in another passage, says, "I may observe, however, that should our Government feel so inclined, and I am not one of those who doubt their disposition to benefit Ireland, it would be very easy for them indeed to establish in Dublin a school of practical science, not inferior to any existing elsewhere, and calculated, for the reasons already glanced at, to confer the most signal benefits on this part of the empire." He then alludes to the geological branch of the Ordnance survey which existed before the establishment of the geological survey of the United Kingdom: "Through the means, I say, of the geological department of the survey, a most extensive and valuable collection of rocks, minerals and fossils is in the possession of the Government, and even already arranged, so that it is at this moment fully available for the purposes of instruction. Here then is a cabinet to begin with precisely similar as to the manner of its acquisition to that arranged by Mr. De la Beche, and which has been made the nucleus of the Museum of Economic Geology established in the Department of Her Majesty's Woods and Forests in London." It seems to me that that may be looked upon as almost a prophecy, or if you like to put it so, as a demand on the part of himself and other scientific men in Dublin, especially those interested in geology, which demand was directly answered by the establishment in 1845 of the Museum of Economic Geology, based upon the survey, in the way I mentioned on the last occasion.

1928. Are you aware whether any representations were made to Sir Robert Peel by men of science upon this point?—I do not recollect at this moment; I was not in Ireland at the time.

1929. Your establishment has experienced various transfers, has it not?—Yes; we were first of all, as shown in the official correspondence which I have mentioned, under the Chief Commissioner of Woods and Forests; we were then transferred to the Board of Trade; and then, after that transfer, the Department of Science and Art arose as a consequence of the Great Exhibition of 1851, which Department of Science and Art took us, as it were, in charge, with some other institutions. They were at first under the Board of Trade, and then the whole was removed from the Board of Trade, and put under the Committee of Council on Education.

1930. I presume that Sir Roderick Murchison is directly responsible to the Committee of Council on Education?—Yes; when it sits at the Department of Science and Art.

1931. Will you explain to the Committee the connection between the Museum of Irish Industry and the geological survey, as regards the collections in Stephen's Green?—In answer to that question, I will read an extract from another letter from Lord Lincoln (I have the whole letter here, which I can put in if it is wished), to Dr. (now Sir) Robert Kane, on the respective duties of the director-general of the geological survey and the director of the Museum of Economic Geology in Dublin. Lord Lincoln then was Chief Commissioner of Woods and Forests; the letter was dated March 29, 1845: "Enquiries are at present in progress for the purpose of providing a proper repository for these specimens, and for any other that may hereafter be collected on the Irish geological survey, or remitted as duplicates from London. I propose that the repository should be divided into two portions; the one to be attached to and considered as in the custody of the director-in-chief of the survey; the other exclusively in your own. To the former of these portions I propose that all specimens should, in the first instance, be conveyed, for classification and arrangement, by its own officers, for its own immediate purposes, and that from time to time, as these purposes shall, in the opinion of the director of the survey, have been fulfilled, such specimens, as it is found can be dispensed with, shall be transferred to and placed under the immediate care of the director of the museum.

1932. Mr. *Waldron.*] Is that an extract from the same letter as Dr. Kane read the other day?—No, this is another letter; the letters I previously read, and this one, are copied into the official letter books of the geological survey, apparently for our guidance, both in the museum in Jermyn-street and in Dublin.

1933. *Chairman.*] Are those survey collections continually increasing?—Constantly increasing, necessarily with the progress of the survey itself; our operations partly consist in the collection of specimens, and the determination of those specimens, and they are always increasing. We have a very large collection of rocks and of fossils, which are retained exclusively in the custody of the officers of the survey; that is to say, they keep the keys of the cases. We also collect minerals and ores, but as fast as we collect them we hand them over to the director or curator of the museum, to be kept in cases, of which he has the keys. I may state that our arranged and catalogued collection of rocks, is over a thousand specimens, those being the picked specimens, and that the collection of fossils is very large. The fossils in the museum, including those collected by the late General Portlock, consist of 11,821 Irish specimens, mounted on 5,151 tablets, and 5,598 British specimens on 1,696 tablets, making a total of those exposed to view in the glass cases of 17,419 specimens, on 6,847 tablets. Besides those, there are drawers underneath the cases, which contain from 8,000 to 10,000 more specimens, most of which are tableted, therefore the palæontological collections are very large, and are constantly increasing.

1934. In the course of the geological survey, is the number you acquire likely to go on increasing of fossil specimens?—Yes, greatly. There are many large districts of Ireland at present unexamined, which are known to be rich in fossils of a different kind to those which we have examined, and therefore we shall require a considerable augmentation of space, if we are to have an adequate representation of the geological structure of the different parts of Ireland.

1935. Two persons are specially employed to collect for you?—Yes, two persons, whose duty it is to go with the officers of the survey, or alone, making collections.

1936. A considerable number of duplicates are obtained in the course of the survey?—A very large number of duplicates, and of course as we go on the number of duplicates will be larger and larger. Still those duplicates are utilised in this way: we were instructed to make a set of duplicates for each of the three Queen's colleges, and

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of course we send a set to London, and also to Edinburgh. We have sent a set of duplicates to one or two scientific museums on the Continent, and to India; and we hope to be able, eventually, to send duplicates to the geological surveys in Australia, North America, and different parts of the world; and there is no reason why we should not. For certain rocks and fossils Ireland may be looked upon as typical country.

1937. Have you given any of your duplicates to the Museum of the Royal Dublin Society?—No; we have not had any instructions to do so, but there is no reason why we should not.

1938. Sir *Edward Grogan.*] Have you a copy of the instructions directing you to whom to send them?—No, I could not refer to any written instructions; they were instructions given by the late director general, Sir Henry De la Beche, verbally to myself.

1939. *Chairman.*] Has the Royal Dublin Society signified any desire to obtain any of those duplicates?—No application was ever made, that I know of.

1940. They would be an assistance to their museum?—Certainly; I would desire to see them in some museum in Dublin. I see no reason why there should not be in the Museum of the Royal Dublin Society a complete set of fossils, arranged biologically. In order to understand palæontology, it is necessary that there should be two museums having the same things differently arranged, one set of fossils being arranged stratigraphically, and another set arranged biologically; that is to say, in connection with the remains of living animals. Take shells, for instance; a set of fossil shells should be arranged with the living ones, according to the classes and orders to which they belong, and that is an essential arrangement for the physiologist, or biologist, or naturalist; but for the purposes of practical geology, it is necessary that fossils should be arranged stratigraphically, that is, in the order of the rocks in which they occur, and as they occur in different places. Because, for practical geology, we do not so much care what class of the animal kingdom a particular specimen may belong to; we want to know what formation it comes out of, and of what formation it may be considered to be characteristic; so that any man finding that particular fossil would know what formation the rock in which it occurred belonged to.

1941. I presume you do not agree with the opinion of the Rev. Samuel Haughton, in his evidence before the Commission, at page 54, that "the collections made by the geological surveys ought not to be kept together as geological survey collections, but should be sent to a public museum"; and that "it is for the interests of science, and illustrative of the history of the earth's crust, that all the fossils should be brought together and arranged according to their zoological affinities, without reference to where they came from"?—I do not agree with the first part at all, and with the second only so far as this, that it is advisable that there should be one museum having that arrangement, but I totally dissent from him in thinking that that should be the only one. For practical science, it is necessary that the places from which the specimens come should be specially taken notice of, and that they should be arranged according to those places.

1942. I presume you consider that your department chiefly illustrates the history of the earth's crust?—Yes; it places the fossils in the order in which they came into existence, and therefore in their historical order.

1943. The result of the questions I have been putting to you is this, that in the course of time, you will require additional space for your collections beyond the present galleries at Stephen's Green?—The palæontological gallery of the museum is full; we can only now arrange the accessions by having sets of drawers made to put under the cases.

1944. Do you require other space for the geological survey offices besides the galleries for the exhibition of the specimens?—For the present purposes of the survey we require all the space that we have. That space consists, first of all, of the large workroom in the upper part of the building; underneath that we have an office, to keep maps and so on, which is also my own office; underneath that we have a share of the library, in which all the forms and letter-books and accounts are kept, and in which the gentleman who has the charge of them sits; then, in the basement storey, we have a large cellar, in which to keep boxes and packages, and in which to unpack things; and we have also a stationery closet. I do not see how we could do with less accommodation than we have; for we have not yet quite completed half of Ireland; and as the number of our books and maps and sections accumulate, we shall require more room to stow them in ready to answer the demands of the agents who sell them. But I am in hopes, and I have always lived in hopes, that I myself should see the time, or at all events that my successor should see the time, when the operations of the survey should be extended rather than contracted. The plan which I hope to see adopted, that our actual observations in the field, which we enter on the six-inch maps of Ireland, might be made available to anybody requiring a report upon the geological structure or resources of any district whatever. We could, supposing we had a little more assistance and more room, supply that information from the documents which we already keep as records; we could give copies of the observations that are made, with sections and reports, at a very slight additional expense, merely the expense of making the copies, or occasionally, perhaps, of a gentleman going down to look over the ground to see if any new excavations had been made. Such a system, it seems to me, would render useful all the vast accumulation of observations which we have in our office, and this would be highly desirable for the public good. Therefore, I think we should look forward rather to the extension of our accommodation than to the contraction of it.

1945. I gather from that answer, that you do not agree in the remark of the Right Honourable Robert Lowe, in his letter to the Secretary of the Treasury, dated the 26th of May 1863, "That the portion of the geological collection which illustrates the geological survey (and it is nearly the whole of it) is now and must always be kept distinct, and therefore can be as well exhibited in one museum as in the other"; because I presume you, as the officer of the survey, would consider it necessary to be present wherever your collections were?—Our collections are made, primarily, for our own use, and they are exhibited simply because it would be a pity not to exhibit them; but the first object in making the collections is not for exhibition, but for our own use in carrying on the survey; therefore, if you were to take them away from the Geological Survey

vey Office and exhibit them somewhere else, you would either deprive us of the use of them, or we should constantly have to be trotting backwards and forwards between the office and the place where they were exhibited.

1946. Sir Robert Kane stated that the cost of building the museum at Stephen's Green amounted to about 10,000 *l.* ?—Yes.

1947. It has been completed no great length of time ?—It was completed in the year 1854.

1948. Are you aware that there was a vote passed last night in the House of Commons, on account, to complete the Industrial Museum at Edinburgh at a cost of 41,000 *l.* ?—I have been long aware that a building has been in course of erection in Edinburgh, which was to cost 40,000 *l.*, to be called, I believe, the Industrial Museum. I have seen it in the Estimates.

1949. Are you aware that in the Report of the Commission to inquire into the Royal Dublin Society, this paragraph occurs: "The fine spacious building in Stephen's Green, occupied by the Museum of Irish Industry, will become available for any public purpose for which it may be required, or, if it should not be wanted, it may be let or sold to advantage"?—I am. It seems to me a very odd idea to be expending 40,000 *l.* in Edinburgh for the same purpose as the museum in Dublin which it is now proposed to abolish, and which only cost 10,000 *l.* a few years ago.

1950. Do private persons avail themselves much of your institution in order to obtain information with regard to the appearance of ores in their district and the character of those ores?—Constantly: whenever I am in Dublin, there is hardly a week passes but what somebody comes in with some specimens, or to ask for some information, or to look at the map of some district. Sometimes two or three parties, in the course of the day, will come in for that information, independently of persons who come to get the information themselves in the galleries. They come into the office: and if it is information which I can give, I give it as a matter of course, very often without asking their names; and if I cannot give the information, I get it from Mr. Gages, or somebody else in the Museum. Information is constantly being given, and I have known in some cases it has been of very great importance. In some instances, where I have taken a little more trouble about giving information, I know that I have saved a useless and fruitless expenditure of hundreds of pounds at different times.

1951. You have given encouragement in some respects, and you have discouraged very many delusions in other respects?—Yes. The chief practical benefit that has been derived from the geological survey of the United Kingdom has been rather to prevent fruitless than to direct profitable expenditure; and for this reason. People are not at all aware of the constant search that is going on in Ireland as well as in other parts of Great Britain after mines; I verily believe there is no country in the world that has been so much searched for mines as Ireland. Both in Dublin and in the country people are continually coming to us about supposed discoveries of mines; and I know that there has been a fruitless expenditure (sometimes in searching for coal, and sometimes in searching for minerals) to a vast amount, and we have succeeded in stopping much of that. I would undertake to say, that I have personally saved a fruitless expenditure to individuals (and, of course, the nation is made up of individuals) which, if capitalised, would pay the whole of my salary for the term of my natural life.

1952. With respect to the lectures: you have lectured under the committee of lectures, have you not?—Yes.

1953. Are you acquainted with the system on which the lectures are given in Jermyn-street?—Yes; I have lectured there for my colleague, Professor Ramsay, on two occasions when he has been unwell.

1954. What are the differences, if any, between the system at Jermyn-street and the system in Dublin?—The London system, so for as I am acquainted with it (there may be details which, perhaps, I am not thoroughly acquainted with) is this. The director (now Sir Roderick Murchison) and the professors have been left free to devise the best system for carrying out the objects of the institution; the director and professors have formed themselves into a council, and they meet periodically in council to adjust the number of the lectures, and all the details connected with them; and the consequence is, that they have established an excellent working system. In Dublin, I suppose, we should have been established on a similar basis in 1854; but when Dr. Playfair came over, being then Secretary of the Department of Science and Art (I should have said, perhaps, that the system was established at Jermyn-street before the Department of Science and Art came into existence) he found himself hampered by the previous existence of professors under the Royal Dublin Society; and he, or the authorities, thought it necessary to incorporate the whole together, because the professors of the Royal Dublin Society were paid to a large extent, if not wholly, out of the public funds; and therefore, unless the two systems had been incorporated, it would have had the appearance of two competing systems being established at the public expense. He then proposed to "relieve" the Dublin Society, as I believe it was phrased, of its educational staff, and to combine them all together under one person, the director of the museum. He found, however, great opposition arising, on the part of the Royal Dublin Society, to this plan. There was a great agitation got up, and deputations came to London to protest against it; the consequence of which was, that a compromise was come to, which I did not at all like at the time, and which I privately protested against, but which, when Dr. Playfair begged me not to make any difficulties, I consented to, against my better judgment, for the sake of peace and quietness. That compromise was, that we were no longer to be professors of the Museum of Irish Industry, but we were to be called professors of the Department. My appointment was lecturer on geology to the Museum of Irish Industry, and I never got any other official appointment at all. Then the committee of lectures was established, and we were to give lectures, as it was said, "common to the two institutions," I never knew exactly what that phrase meant; but, these courses of lectures, which were to be common to the two institutions, were to be given under the auspices of the committee of lectures. We consented to this. It was, after all, a form rather than anything else, but it interfered with us to this extent: when the professors came to consult with Sir Robert Kane, as director, about arranging the lectures, we understood from him that we must give courses of free lectures at the Museum of Irish Industry and at the Royal Dublin Society, under the supervision of the committee of

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lectures, before we could come at our real systematic instruction, to be imparted to students who wished to acquire professional instruction. Therefore we were half-strangled, as it were, at our birth.

1955. It was stated by Sir Robert Kane, and also by Dr. Sidney, that in no way whatever had the committee of lectures interfered with regard to the lectures that had been given in Dublin?—No; I have never heard of the slightest case of interference. It was merely that Sir Robert Kane, at the commencement, when we assembled to arrange our courses (which we have always done every year), said that we must devise some plan by which a certain number of free lectures should be given, *pro formâ*, as it were, under the committee of lectures.

1956. Your objection is to the system, and not at all to the manner in which the committee of lectures have interfered in the detail of the arrangements?—No. They have never interfered, but we were obliged to cripple the system that should have been established in order to provide for this complicated arrangement, and render any interference unnecessary.

1957. Your objection applies to the system of lectures as delivered in Dublin?—Yes.

1958. I presume you consider it a great inconvenience that one man should be carrying on a course of lectures in two different places?—The greatest possible inconvenience. There was this necessity pressed upon us: that we must either chop up our courses into three portions, which would be utterly inadequate to give any instruction in any one branch of science; or we must do, as I commenced at first to do spontaneously, namely, simply begin at the beginning, and lecture through the course, adapting the course to this peculiar arrangement; delivering part of the course as free lectures at the Museum of Irish Industry, and then delivering the next part of the course as free lectures at the Royal Dublin Society, and reserve the really systematic part of the course, that is, the part which required personal contact with the students, for the lectures for which a slight fee was charged at the Museum of Irish Industry. But if we had been left free, with the responsibility of devising a good system, placed, as at Jermyn-street, upon the director and the professors, then we should have had, at all events, an opportunity of showing what we could do. As it was, we were so meddled with, that we cannot be considered as responsible for the system at all.

1959. The great objection that has been made to the system of the Dublin lectures is, that they are not systematic; that you commence with the popular course to one class of listeners, and go on with the more advanced course to another class of listeners in a different place?—Yes; but the persons who come into the last part of the course ought always to have attended the previous part of the course.

1960. But they do not attend the previous part of the course?—Not invariably. I have had, sometimes, difficulty thrown in the way on that account. When I have come to the examination, and have put questions into the examination paper referring to the first part of the course, some of the students have said, "I never attended that."

1961. Is it true, or not true, that in giving those popular courses of lectures, the lecturer popularises his lectures in order to make them agreeable and brilliant to the audience at the Royal Dublin Society, whereas he pursues a severer course at the Museum of Irish Industry?—Yes; that is to say that the free lectures, whether given at the Museum of Irish Industry or at the Royal Dublin Society, must be more or less *ad captandum vulgus*. You see a great number of people who have come to spend a leisure hour crowding in, and very often a parcel of children are stuck down before you; it would be quite hopeless to give any dry instruction there. The natural tendency of a lecturer's mind is to attract the attention of the people he sees before him; therefore, with such an audience, he has to omit all the dry details necessary for thoroughly understanding the subject, and endeavour, in a popular style, to attract them. That was the system previously in existence under the Royal Dublin Society, and having to carry out that old system imposed upon us, of course it necessarily deteriorated us to a considerable extent.

1962. Would the reform which you would wish to establish for this state of things be to draw some line of demarcation, and to have a continuous system of lectures as far as you could carry them on in your own establishment, for which you should be responsible?—I should wish that we should have liberty given to us freely to devise a good system of thorough practical instruction in the different subjects. Those might be attended, perhaps, by only very few people; but the cost of thorough instruction to even a few (say five or six young men per annum) in those branches of science which we are prepared to teach, would be amply repaid to the nation in the course of years. The nation would be repaid the expense in the greater economy which would be introduced into the different practical operations of mining or metallurgy, or the different manufactures in connection therewith; and also, in the course of years, the inevitable result must be that new discoveries would be made by those men in consequence of the good practical instruction they had received to begin with. It would have an inevitable tendency to do this. You might never be able to trace it directly, so as to put it into a return or a report; but it is obvious it must have that tendency, and would, in the course of a few years, repay the trifling expenditure incurred upon the system of instruction. It is a system of instruction which is not given anywhere else, and could not be given anywhere with the same facilities and advantage as in connection with the operations and collections of the geological survey. But when a number of men are giving this instruction, having peculiar facilities and capabilities for giving it, there is no reason at all why the same men should not also give popular lectures in the evening, just as they do in Jermyn-street. In Jermyn-street there are three or four lectures given in the course of the day; the real students are there the whole working part of the day, but the professors in Jermyn-street voluntarily undertook to give popular evening courses to artisans; and there is no reason why we should not do so at Dublin; but I would not have them free.

1963. Do the artisans attending the lectures at Jermyn-street pay any fee?—Yes.

1964. How much?—I think it is only 6 *d.*; but it imposes upon them the necessity of coming and getting a ticket, and showing that they are really anxious to receive the information imparted. You cannot give education or instruction by those popular lectures, but you give a certain amount of information, and stimulate a taste for knowledge

ledge in men's minds, giving them subjects for thought, and so on.

1965. Are those lectures to artisans at Jermyn-street well attended, or not?—They are crowded. I have given some myself; they are crowded with a most intelligent audience of earnest-looking men; and the lecturer, seeing such a class before him, naturally puts forth his best exertions to address such an audience.

1966. When you say "artisans," is there any test on admission to prove that they are artisans?—Yes; I believe in Jermyn-street it is necessary that they should bring certificates from their employers, to show that they are in the receipt of weekly wages.

1967. I presume you do not consider a large attendance of persons at the lectures to be the real test of the utility of those lectures?—No; at free lectures you may have any number, if you make them amusing enough. If you were to exhibit conjuring tricks you would have a greater number attending than would attend a scientific lecture; just as if you were to exhibit waxwork you would have a greater number visit it than would visit a scientific museum. The test of the number attending a lecture is altogether a fallacious test; it is no test of the value of the lecture; it would be rather an evidence of its superficiality than of its containing sound information or instruction.

1968. I am not to understand from you that you object to lectures being very largely crowded?—Certainly not, if a number of people feel sufficient interest in a really scientific lecture, and prove it by paying a fee. I am not speaking now in the interest of the professor; or that he should pocket the remuneration; but it seems to me that persons coming to the lectures should prove their interest in them by paying some fee: and by that means we should get rid of the children. In the evening lectures at the Museum of Irish Industry, and still more at the afternoon lectures at the Royal Dublin Society, there is often a parcel of children put in front of you who cannot possibly understand the lecture; and the consequence is that they play and amuse themselves the whole time, and very often make a disturbance. I have been frequently obliged to speak to the boys for making a noise during the lecture. Besides which, at both institutions a number of persons have come simply to look at the diagrams and maps; at first our lectures at the Museum of Irish Industry were crowded immensely; ladies were carried out fainting, and the galleries were half-full; but in the second or third session complaints began to be made that we had not any fresh pictures, and the attendance therefore rather fell off.

1969. I presume, as you do not consider the number of persons who attend the lectures to be the test of the value of those lectures, neither would you agree in this statement in the Report of the Commissioners of 1862, that it is the number of persons who visit a museum that is the test of the value of that museum?—Certainly not. A scientific museum should be supported at the public expense, because no private person, however wealthy he may be, can found a large scientific museum; and even if he did his successor would not keep it up. Permanency is one of the elements of a scientific museum, and its object is for the use of scientific men and scientific students, and the extension of science itself. The attendance of a great number of persons at a scientific museum merely results in the diffusion of some knowledge of science among the people; a very valuable result no doubt, but it is not the primary object for which any museum whatever should be kept up at the public expense.

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1970. I presume you do not agree with this passage in the Report: "Many persons visit one museum; few take the trouble to visit two. By collecting all our objects, therefore, in one museum, they will be seen by more people than if they were divided between two. By concentrating our means and efforts on one museum, it may be rendered more complete and attractive than if two museums had to be maintained. More people are, therefore, likely to come to one museum than to two, and they are likely to get more instruction from it"?—No; because it is based entirely upon the idea that advantage can be derived by anybody from coming once to a museum and passing through it. Unless a highly-instructed man, who goes to the museum for the express purpose of seeing a particular object in it, nobody can derive any advantage from going through a museum once. Crowds of mere curiosity-seekers gaping at the things, and not previously knowing anything about them, can derive little or no instruction from them. And, as regards having two museums, it is not necessarily more economical to have one museum than two, if you have to make provision for the same collections; they must be either in one room sufficiently large to contain them, or in two or three. Whether the rooms should be in the same building, or a different building, altogether depends upon the object of the museum.

1971. This paragraph seems to apply to a scientific museum pretty much the same test that you would to Madame Tussaud's Gallery, or to a picture gallery, viz., that the number of persons frequenting it prove its utility?—Yes; I will give an instance in point. The collections of rocks and fossils now arranged in the Museum of Irish Industry were made by the geological survey; and the persons that have hitherto derived the most benefit from them are, I believe, myself and the officers of the survey who collected them. I do not think anybody has derived so much information from them as we have. We could know nothing about them till they had been all spread out and arranged, and placed in such systematic order as should show their relations to each other.

1972. Do you think any person with a particle of common sense would come to the conclusion that the museum at Jermyn-street should be amalgamated with the mineralogical collections of the British Museum, in order to make the combined collections more attractive?—No. I would avoid making such collections attractive, except to scientific men, by the science displayed in their system of arrangement.

1973. Or do you think anyone of common sense would conclude that the combination of those two collections would make them more instructive?—Certainly not. Even as regards minerals, it would be advisable to have two or more collections arranged in different museums on different systems (the one perhaps arranged as to their external physical characters, and the other with regard to their chemical constitution). A student should have the means of examining two such museums; but it would only confuse him if they were arranged side by side. It is better they should be separate, that he should be able to go at one time to one, and study the one mode of arrangement, and at another time, when taking up another

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branch of study, to another where the arrangement was most appropriate to it.

1974. I presume Sir Roderick Murchison does not attach any value to the Jermyn-street Museum, on account of the number of persons that might happen to walk through it, but on account of the persons who go there to obtain some practical value from the collections in it?—I should say he would only value numbers so far as this, that as the Department of Science and Art seem to base the value of a museum upon the numbers visiting it, it naturally makes us anxious that a number of persons should come in, whether they get any advantage from it or not, in order that we might not suffer from an appearance of not coming up to their standard of utility.

1975. The Commissioners, I think, proposed that your professorship should be continued, but that you should be connected with the Royal Dublin Society as professor of geology?—There is a recommendation that the professor of geology, who at present lectures in connection both with the Royal Dublin Society and the Museum of Irish Industry, should be attached to the Royal Dublin Society.

1976. Have you any objection to that arrangement?—Decidedly.

1977. On public or on private grounds?—I would mention some personal objections first of all. One is, that as lecturer on geology at the Museum of Irish Industry, I am in the public service, and as such entitled eventually to superannuation; but if I were placed under the Royal Dublin Society, that claim would entirely cease; and even though I might be entitled to superannuation in regard to the salary connected with my other office, I should lose so much of my claim as regards the 200 *l.* a-year, in respect of the lectureship on geology. Then I should have an objection, I must say, to act under any body like the Council of the Royal Dublin Society, a shifting and miscellaneous body, that moves from year to year. As an officer, I should of course, like to have over me some one individual as a superior officer, with whom I could come in contact, face to face, and with whom upon occasion I could consult, and from whom I could receive assistance, or with whom, if need be, I could remonstrate, or he with me. With any sort of Board or Council, you lose all the advantage of this personal contact and direct intercourse. In a large miscellaneous body you cannot have any direct intercourse with any one man whom you can regard in the light of a superior officer.

1978. Will you take that list of the Council of the Royal Dublin Society for the year 1864 in your hand, and tell me if you consider that body are a class of persons to whom you would entrust the management of scientific education?—No. I must say they are all most respectable gentlemen; I should be glad to dine with any one of them, or have any association whatever with them, but, except Sir Richard Griffith, I cannot say that I see any man who is a man of science. If you want to establish a system of scientific instruction, it seems to me to be necessary that you should put it under one officer, in the same way as if you wanted to establish a regiment. I think the officers of a regiment would object to having their colonel superseded by a committee of civilians; I should have the same feeling with respect to these gentlemen in the Council of the Royal Dublin Society; I should not like to see my director superseded by a Board or a Committee or a Council, however respectable as gentlemen the members of it might be.

1979. I presume you would be perfectly satisfied if you had to deal with one man like Sir Richard Griffith?—Yes, perfectly.

1980. What you object to is being placed under a fluctuating body, composed mainly of gentlemen not scientific?—Yes; there is another point; it might easily happen, I do not say that it would happen with the present body, I do not think there is anybody there to whom my observation would apply, but it might easily happen that one or two individuals might get into that body who would make themselves excessively busy in the department that would be connected with me, and who might make it very unpleasant to me; they might also adopt plans or schemes that would be very injurious to the public service; and yet they would be a small irresponsible clique, lost altogether in the large body; the action would appear to be that of the whole body, whereas, in reality, it would be only that perhaps of one or two individuals who had got themselves specially up in the subject of one department, and were therefore supposed to be authorities upon it; and you could not get at them; there would be no personal intercourse between the professor and those individuals, because they would be masked by the council; I think, therefore, it would be very likely that matters would arise that would be unpleasant to both parties, and injurious to the service. Independently of that, it seems to me impossible that you can carry out a practical scheme without having one man constantly at hand to whom you should be always able to go, and whose business it should be, and who should be directly responsible for the working of the institution.

1981. You want a man to whom you could be directly responsible, that man himself being responsible to the Government for any complaint that might be made?—Certainly; if you want the thing done, the best way is to get the best man to do it, and to make him responsible for its being done.

1982. What would Professor Huxley or Dr. Percy say, do you think, if they were transferred from Jermyn-street, and placed under a fluctuating council?—I think that they would refuse to have anything to do with it, as I should myself.

1983. Do you think there is any analogy between the Royal Dublin Society and the Electoral Roll of Cambridge, or the Board of Trinity College in Dublin, as a constituency?—No, I do not see any analogy at all, simply for this reason; at Cambridge, and in Trinity College Dublin, the Board of Trinity College, or the Electoral Roll of Cambridge, consists of persons who have come to those universities as young men, who have been brought up in the universities, who have passed their whole lives there, whose fortunes are bound up with them, inasmuch as they derive their whole means of existence from them; they have therefore the greatest interest in the success of those institutions to a much greater extent than you could say any member of the Royal Dublin Society has in the success of that institution; and, also, they are necessarily the persons who are best able to form a judgment upon the qualifications of the persons whom they appoint, or upon the kind of instruction that they give; you could not say that of the members of the Royal Dublin Society.

1984. To proceed to the provincial lectures; do you approve of the system of provincial lectures?—Certainly; they have done great good in Ireland, and I believe that if the system, as it has been lately improved and perfected by the committee of lectures (in reality by Dr. Sidney), was maintained, it is still calculated to do the greatest good. Instead of being at all antagonistic to the system of scientific instruction lately brought into existence by the Department of Science and Art, I think the two are calculated to work together most admirably. So highly do I think of the system of provincial lectures, as established in Ireland, that I should recommend the Department to establish them in England; I know that, formerly, when discussing this very point with my late friend, Professor Forbes, he was very much struck indeed with the system of provincial lectures in Ireland—even as it existed then, and he wished very much that a similar system had been introduced in England.

1985. The science system has not superseded altogether lectures in England?—There never was any provincial lecture system in England.

1986. Lectures are given at Jermyn-street?—There is no connection between them at all, except that the Science Schools established by the Department of Science and Art are excellent things for bringing up young men, some of whom would eventually take up science as their profession, and come up to Jermyn-street as to a college, in order to complete their education; I do not see why the same thing should not take place in Dublin.

1987. Were those provincial lectures a suggestion of the Royal Dublin Society, in the first instance?—No, they were the suggestion, I believe, of Professor Davy to the Committee of the House of Commons in 1836. By the Proceedings of the Royal Dublin Society that suggestion seems to have remained a dead letter till 1842, when Lord Eliot, now the Earl of St. Germans, then Chief Secretary for Ireland, offered to the Royal Dublin Society 300 *l.* a year for the purpose of carrying it out. The Council seem to have been a good deal puzzled to know what to do with it, and they applied to him to know how to expend it, and he left the details to themselves. Then, in 1845, he, or at all events the Government, voluntarily increased the grant from 300 *l.* to 500 *l.* per annum.

1988. There seems to be a kind of impression abroad that these provincial lectures are intended to be the means of giving a course of education; how far do you consider that to be a correct impression?—I have heard the word education mentioned in connection with this inquiry two or three times; I do not think any of us profess to give education; I would not think of giving education in our museum. I would confine it to instruction in certain things, and it is obvious that the system of provincial lectures could not possibly give anything worthy the name of education; they can hardly give instruction. Their object is to excite inquiry, to draw attention to matters of science on the part of the people generally. They are perhaps rather directed to parents, in order that they might afterwards turn their children's attentions to scientific subjects, but generally to the whole population, to create in them a desire for scientific instruction.

1989. I gather from your answer that you consider them to be, as it were, a kind of preparation for the establishment of scientific schools?—Certainly.

1990. And then, I presume, the scientific schools being once set on foot, you would advocate that the young men who are educated there, and who have an aptitude for it, should come up to Dublin, and receive a finished education at your institution?—Yes; I should not suppose it likely that any large number of them would do so, but only the very picked men; the young men who had exhibited a special aptitude for taking up science professionally, to get their living by it, and there would be very few of those.

1991. I presume, in any future arrangement that might be made, you would not advocate any alteration of the system of the committee of lectures, as regards provincial lectures?—I think they have shown such great capability of managing them, and I believe that there has been such a success under their auspices, that I should hesitate very much to interfere with them.

1992. I wish to call your attention to a letter upon which some stress has been laid, which is published in the Commissioners' Report, and which is a letter to Captain Donnelly, from the Right honourable C. B. Adderley, who occupied the position of Vice-President of the Committee of Council on Education. Mr. Adderley says in this letter, "I have no means of suggesting by what new arrangements a simplification of the institutions under consideration might be best effected, but I certainly left the Department fully convinced that it would be for the interests of the public that the Royal Dublin Society and Museum of Irish Industry, having now every provision in duplicate for the same objects, should be brought together, and made one, at least as far as the Treasury is concerned with them." Let me call your attention to the following paragraph: 'The double staff, double lectureships, double collections, double building, and fitting grants; double services of all sorts, kept up by aid of national taxation for identical purposes on the same spot, cause an obvious waste of resources.'" Is that last paragraph correct in any of its assertions; first of all, is there a double staff?—No, certainly not; there is no double staff.

1993. Are there double lectureships?—Not unless you choose to call me a double lecturer, because I was made, against my will, by the Department to lecture at the two institutions; even then I do not get a double salary.

1994. Are there double collections?—The Museum of the Royal Dublin Society contains a large collection of birds, and there are a few birds in the Museum of Irish Industry; but those are merely the Irish birds collected by the Ordnance Survey, and they might be transferred any day to the Royal Dublin Society. Then, as regards the collection of fossils, I do not know what fossils the Royal Dublin Society have packed up in cases; but I was looking through the Museum the other day, and only saw, of British fossils, one case of Carboniferous fossils, and another case of mammoth and other bones from Dungarvan; whereas we have between 20,000 or 30,000 fossils, all named.

1995. Do you think the expression "double collections," would be properly applicable to the collections at the British Museum and the collections at Jermyn-street?—No, I think it would be a very fallacious use of the term, show-

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ing a want of knowledge of the reason of the collections and their methods of arrangement.

1996. "Double building and fitting grants;" would not the same expression be applicable to Jermyn-street, and the British Museum?—Yes.

1997. Are there "double services of all sorts kept up for identical purposes," in both establishments?—I do not know what is meant by "double services;" of course you must have porters and attendants upon the rooms; whether the collections were in one building or another, the building would require attendants and porters; if it is meant to refer to higher officers, I do not see any double staff at all, neither is there any identity of purpose.

1998. I am to consider, then, that this paragraph is wrong in every single particular?—I must confess it conveys a very erroneous idea of the truth.

1999. I presume that Captain Donnelly must be perfectly aware whether that paragraph is correct or incorrect?—I believe he holds the office of Inspector of Science under the Department, and as those two Institutions are under the Department, it would seem to me that Captain Donnelly ought to be thoroughly acquainted with them.

2000. Therefore has not Captain Donnelly, the Inspector of the Science and Art Department, inserted in this Report a letter which he ought to have known to be utterly erroneous?—Certainly, if he inserted that letter. I should say this; he ought to have given Mr. Adderley, who had been formerly Vice-President of the Board of Council on Education, such information as would have prevented him from forming such a misconception as is contained there.

2001. Do not you conceive that the letter of Mr. Adderley is calculated altogether to create a false impression in the mind of any person who reads it?—Certainly.

2002. Were you examined before the Commission?—No.

2003. Was Sir Roderick Murchison examined?—No.

2004. Did you apply to be examined?—No, I could not, because I was President of the Geological Section of the British Association, which was sitting at Cambridge exactly at the same time as I heard the Commission was sitting at Dublin, but I received no official intimation of even the existence of that Commission.

2005. Sir *Robert Peel.*] Were not you back in Dublin before it concluded its sittings?—No; I rather hurried back, but I found it was closed.

2006. *Chairman.*] No communication was made to you at all on the part of the Commissioners that they wished to have your evidence?—No.

2007. Does it appear from the Report that the Commissioners ever considered the fact of the existence of the Geological Survey?—There is scarcely any mention of it in the Report; they seem to have almost ignored our existence.

2008. They seem to have recommended the sale of the house in which you are lodged?—Yes; even where they speak of the geological collections, they do not speak of them as belonging to the Survey, and as being in the charge of Sir Roderick Murchison.

2009. I dare say you have considered that it would be advisable that there should be some line of demarcation drawn between the functions of the Royal Dublin Society and those of the Museum of Irish Industry?—Certainly.

2010. Have you any recommendation to give the Committee with regard to the position in which you would place each of those institutions, so as to avoid the continued trenching, as it were, upon the functions of one another?—I should be very anxious to see the Museum of Irish Industry restored to those functions which, it appears to me, it was originally intended it should exercise, as appears by the Minute of the late Sir Robert Peel, and by Lord Lincoln's letter, which I laid before the Committee at its last meeting. It appears to me that, in the Geological Survey, the museum that springs from it, and the lectures that were intended to arise out of the two, you have a good definite system; first, a scientific investigation; then a collection of objects, the result of that investigation, and afterwards a means of explaining their nature and uses to the public, and of giving a certain professional instruction to a few persons, the result of which instruction would be highly advantageous to the general public. I do not see why that should be supposed at all to trench upon the functions of the Royal Dublin Society, except, perhaps, in these two respects: first, the change of the title of the museum, from its original one of the "Museum of Economic Geology," to the "Museum of Irish Industry." After all, that collision is rather a nominal one, because the Royal Dublin Society at that time, except their Agricultural Museum, had no industrial collections, neither were there any lectures given upon industrial subjects. Secondly, the Survey may also, to a certain extent, be said to trench upon ground formerly occupied by the Royal Dublin Society, inasmuch as between the years 1814 and 1830 the Royal Dublin Society caused geological surveys and mining reports to be made by Sir Richard Griffith, who was then their professor of mining, and mining engineer; but everything of that kind was abandoned by them in the year 1830, upon his resignation, and there has been nothing of that kind going on at the Royal Dublin Society ever since. Besides, I must say this, that the objects of the Royal Dublin Society, as far as I can gather them, seem to have been so very general, not to say multifarious, that it would be almost impossible to establish any institution intended to work anything in Science or Art, that might not be said to trench to a certain extent upon ground either now occupied by the Royal Dublin Society, or which it had formerly attempted to occupy.

2011. Would you limit the functions of the Royal Dublin Society?—I should be glad that they should not interfere with us; that we, having our definite object in view, should be allowed to go on with it, and develope it and give it its natural extension. It does not seem to me to be the part of any body of men, actuated by patriotic motives or public spirit, to throw any impediment in the way of developing the scheme of an institution, calculated to work such a great amount of public good as I think we can show our institution is calculated to work. It seems to me that the Royal Dublin Society, having been originally established, according to its Charter, for the advancement of husbandry and other useful arts in Ireland, might have a field quite wide enough for its resources to cultivate, without interfering in any way whatever with an institution, the necessity for which exists in Ireland as much as in England.

2012. You

2012. You consider that an arrangement might be made for placing the Museum of Irish Industry on precisely the same footing as the Jermyn-street Museum is at the present moment, and giving to the Royal Dublin Society the chairs, as it were, of natural history, including botany?—Yes.

2013. Would you go further?—I think that, supposing we were established upon the plan which I think I have shown to be our original plan, then the Royal Dublin Society might be left to develope husbandry, and the arts or sciences immediately connected with agriculture, without interfering with us, and without our interfering with them, but, on the contrary, to the mutual benefit and assistance of the two institutions. Supposing that they had lectures, upon any scheme they chose to adopt, upon zoology and botany, and upon any of the manufactures of animal and vegetable products, I do not see why they should not leave us the mineral kingdom and everything derived from the mineral kingdom. Let the Royal Dublin Society take the organic kingdom, the animal and vegetable kingdom, and everything derived from it, and let us take the mineral kingdom; I think that there might be two excellent actions going on quite independent of each other, and mutually assisting one another.

2014. You would have to make some addition, would you not, to the present museum if you were to assimilate it to the Jermyn-street Museum, with regard to professorships?—Yes; there would require, as was said the other day by Sir Robert Kane, to be a professor of mining and mineralogy like Mr. Warington Smyth; and also Sir Robert Kane mentioned that there would require to be a professor of practical mechanics, to deal with subjects connected with machinery, for instance, with mining machinery.

2015. You think that by an arrangement of that kind, a line might be drawn, that would enable both institutions to work harmoniously, and for the benefit of the country?—I do not see at all why it should not.

2016. Sir *Edward Grogan.*] If I understand you rightly, you are of opinion that the provincial lectures have been of decided benefit to the country?—Yes.

2017. And that they are not in any manner antagonistic to the system of science schools?—No, quite the contrary; they would be the natural aids to such a system.

2018. You consider that they mutually act and react on each other beneficially?—Yes.

2019. On that branch of the question, I do not think it necessary therefore, to ask you any questions; but the Chairman in calling your attention to Mr. Adderley's letter, printed in this report, asked you whether Captain Donnelly was not wrong in inserting a letter which he ought to have known to be erroneous, he having a full knowledge of the two institutions?—In answer to which question I stated that I thought that Captain Donnelly ought to have made himself sufficiently acquainted with the history and the nature of the two institutions so as to have prevented Mr. Adderley from stating in his letter what is a misconception of the nature of those two institutions.

2020. That is your impression?—Yes.

2021. Has Captain Donnelly himself, ever communicated to you his knowledge upon the subject, or has he ever stated to you that he considered that this letter was wrong?—Oh, no; I have never more than once or twice seen Captain Donnelly; I never saw him in Dublin but upon one occasion; when I saw him in the Museum some years ago, and seeing him there, I invited him into my office to look at the maps.

2022. Then how can you speak for his considering this letter to be wrong?—I should say as he holds the office of Inspector of Science, specially under the Department of Science and Art, it would appear to me natural that he should make himself thoroughly acquainted with the history and nature of all the scientific institutions under the Department of Science and Art.

2023. Have you any doubt whatever that he has done so?—I have no reason independently of this letter to suppose so.

2024. Captain Donnelly, I believe, has visited Dublin on more than one occasion, for the purpose of inspecting the Museum of the Royal Dublin Society, and the Museum of Irish Industry?—Possibly; I never saw him in the Museum but once, some years ago.

2025. You have no reason to doubt that he has a thorough knowledge of the operations of the two societies?—I have no reason to doubt it, except this circumstance, that as Vice-President of the Board of the Committee of Council on Education, Mr. Adderley was his directly superior officer, and one would have supposed that in that case Mr. Adderley would have acquired from the Inspector of Science of the Department, a more thorough knowledge of the institutions than he seems to have done, especially as our arrangements were made for us by the Department. I would observe that there are not *two* societies; we have no society attached to us; we are simply a Government office.

2026. Captain Donnelly, I believe, is an officer connected with the same establishment as yourself, the Department of Science and Art?—Yes, he is one of the officers of the Department of Science and Art.

2027. He was one of the Commissioners who sat in Dublin in 1862?—Yes.

2028. When you find in a Blue Book issued by the authority of those Commissioners, and by the authority of the Government, a letter of this kind inserted, is it not most probable that Captain Donnelly approved of the statements in that letter of Mr. Adderley, and concurred in them, or he would not have inserted it?—It does not appear to me that Captain Donnelly would consider himself entitled to express either approval or disapproval of the letter.

2029. Inasmuch as the Commissioners inserted it in their own Report, have you any doubt that he approved of it?—I should suppose that he must have done so.

2030. Then the result is this, that your construction of that letter, and Captain Donnelly's construction of that letter, differ?—The conclusion I come to is this; there are what I consider misstatements in Mr. Adderley's letter, and I must say that I think it was the duty of a gentleman holding the office of Inspector of Science to prevent the gentleman who had been formerly the head of the Department from making those misstatements.

2031. Then you are under the impression that that letter contains misstatements?—Yes.

2032. You do not suppose that Captain Donnelly, as a Commissioner, would have inserted that

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that letter in the Commission Report, if he had believed there were misstatements in it?—Of course, I suppose that Captain Donnelly did believe the statements to be true.

2033. It resolves itself into this; there is a difference between you and Captain Donnelly as regards the nature of these statements?—Yes.

2034. You have seen this Report?—Yes.

2035. The substance of these statements, or misstatements, as you seem to consider them, of Mr Adderley, amounts to this, that there is a double system of education, and unnecessary expense in continuing the two establishments in Dublin?—Yes; the statement is this, that there is a double staff, and so on, for identical purposes on the same spot, causing an obvious waste of resources. I maintain that there is not a double staff for any identical purpose.

2036. Is not the meaning of that passage in that letter that there is a waste of resources in the Educational Department, because there is a double staff, double lectureships, double collections, double building and fitting grants, and double services?—Yes.

2037. Will you turn to page 26 of the Report, and read the paragraph there?—"It will be seen from this description of the actually existing arrangements, that two institutions, and two systems of instruction, having the same general objects in view, are in concurrent operation."

2038. Is not that identical almost in terms with Mr. Adderley's letter?—Yes.

2039. It is identical in substance?—Yes.

2040. Then how could you possibly state that Captain Donnelly erred in admitting into the Blue Book a letter from Mr. Adderley stating, in almost identical terms, that which the Commissioners state in their Report?—I did not say that Captain Donnelly was wrong in admitting the letter. I deny the truth of that statement in the Report, in the same way that I deny the statement in Mr. Adderley's letter. I do not think that Captain Donnelly ought to have refused to admit Mr. Adderley's letter.

2041. It appears that Captain Donnelly, one of the Commissioners, and the other Commissioners in concurrence with him, inserted that letter under the belief that it was a real representation of the state of things at that moment in Ireland?—Yes.

2042. And that they inserted that letter from Mr. Adderley, it being substantially the same as what they state in their own report, with a little enlargement?—Yes.

2043. So that they both correspond?—They correspond.

2044. You stated that the provincial lectures arose out of a suggestion which Professor Davy gave before the Committee of 1836, and that the Royal Dublin Society did not act on it for many years; do you know anything of the financial position of the Society at that time?—I made that statement from finding it in the Proceedings of the Society; I was not in Ireland at that time.

2045. Have you made an extract from the Proceedings of the Society, with regard to that particular transaction?—In volume 84 of the Proceedings of the Royal Dublin Society, I find letters by Dr. Scouler and Professor Davy, in which Professor Davy speaks of the provincial lectures, as having been suggested by him to the Committee of the House of Commons in 1836.

2046. And that it was not carried out?—He does not mention that in that letter; but you will see in the Proceedings of the Society for 1842, Lord Eliot's letter, offering them 300 *l.* for the purpose.

2047. The Proceedings show that Lord Eliot had written that letter to them, offering funds?—Yes.

2048. Are you acquainted with what was the position of the Society at that period, as regards funds?—Not except from looking through their Proceedings.

2049. What is your knowledge about the financial position of the Society, from looking through their Proceedings?—I believe that they were in receipt of their usual grant.

2050. Had they funds to apply to the object at that time, independent of the money offered by Lord Eliot?—I do not suppose that they had.

2051. When you stated that this remained in abeyance for so many years, it might have conveyed the impression that it was neglect upon the part of the Society; is that what you intended to convey?—It appears to me that it was so, because it is obvious that if the Committee of 1836 recommended a certain system, and the Society had applied for money to carry it out, they might have got it; it appears to me to be so, because there was an actual offer of money afterwards.

2052. The offer was made by Government; but are you aware that the funds voted by Parliament for the assistance of the Royal Dublin Society are all appropriated under the direction of the authorities?—Certainly.

2053. They cannot, therefore, apply any part of those funds to any objects, but those to which the authorities think proper to direct them?—That is the case now.

2054. Have you any reason to doubt that it was also the case then?—I do not know; I have no personal knowledge on the matter.

2055. Taking it for granted that it was, what funds had they for the establishment of those lectures till Lord Eliot offered them the funds?—Probably they had no funds, but they might have got them by asking for them.

2056. Are you aware of the position of the Royal Dublin Society at this moment, with regard to its Museum and its other branches?—Certainly I am.

2057. Are you aware that their building is in a dilapidated and unsatisfactory condition, and not calculated to carry out the objects of the Society?—Yes.

2058. Are you aware that the Society has been applying to the Government and to Parliament, for a grant to enable them to make their building suitable for the objects of the Society?—I believe they have.

2059. Are you aware that up to the present moment they have not got anything?—I believe they have not.

2060. What reason have you to infer, that if the Society had asked for 300 *l.* then, they would have got it, any more than they can get the funds they ask for at present?—Simply, because it was offered to them. There was a recommendation by the Committee of 1836 to adopt a certain plan. It was not adopted till Lord Eliot actually offered them the 300 *l.* for doing it. On the 31st March 1842, there was a letter from Lord Eliot, giving 300 *l.* towards the provincial lectures, and on 28th March 1844, there was a letter from Lord Eliot, informing the Society of the intention of the Government to increase the grant from 300 *l.* to 500 *l.*

2061. After

2061. After the receipt of that letter, however, they did establish the system?—Yes.

2062. Is not it almost cause and consequence, that as soon as they got the grant, they established the lectures, whereas they did not establish them before, because they had not the means?—You will find in the Proceedings of the Royal Dublin Society, that when Lord Eliot offers them the 300 *l.* a year, they apply to him to know what they are to do with it.

2063. Was not it natural for them to ask in what way it was to be expended?—Yes, but if they had been anxious to carry out the system of those provincial lectures, they would have applied for money for it, basing their application upon some scheme.

2064. If money were offered to you for the purposes of the establishment which you are connected with, would you not naturally ask what use was to be made of it?—Yes, certainly, if I had never heard of it before; but if anybody whose recommendation would carry weight with the Government, were to set before me the means of development of the functions of my Department, I do not think that I should let the matter lie dormant.

2065. Your impression is, that because the suggestion was made by the Select Committee of the House of Commons that this particular branch should be established in the country; therefore, as a matter of course, it was to be adopted by the Government and Parliament?—I think so.

2066. You alluded to a visit which you recently made to the Museum of the Royal Dublin Society, and you said that you saw a very limited quantity of fossils?—Yes.

2067. You saw, in fact, as many as I believe the cases would admit of being displayed?—Yes, I do not know what they have stowed away in boxes.

2068. You have no personal knowledge of the extent of their collections?—No.

2069. Do you not know that the collection which they have is to all intents and purposes practically useless to the public?—I do not personally know that they have any collections; all that I saw were very few.

2070. You stated that you believed they had some in drawers, as I understood you?—No; I said I did not know what collections of fossils they have in boxes, but those exhibited to the public are very few. There was only one case of Carboniferous fossils, whereas in the Museum of Irish Industry there are eight or 10 cases of Carboniferous fossils. I mentioned it for this reason, Professor Haughton in his evidence before the Commission speaks of the two collections rather as if it was advisable to join them together for the purpose of filling up gaps in the collection of the Royal Dublin Society, whereas our collections are far larger and more complete.

2071. Have you any knowledge of the quantity of the Carboniferous fossils belonging to the Royal Dublin Society?—Not at all; I can only speak as to those exhibited.

2072. You saw a very limited quantity?—Yes.

2073. Were all the cases full when you saw them?—The only case that contained Carboniferous fossils was full, I believe.

2074, Have you any reason to know whether they have or have not any larger quantity than was exhibited?—I have reason to believe that they either have, or will have, because I understand that the typical collections, begun by Sir Richard Griffith, are going to them, or that they are already in possession of part of them.

2075. Therefore, it would convey an erroneous impression to say that one case of Carboniferous fossils are the only specimens in the collection of that particular class of fossil?—I expressly said "exhibited to the public" in the museum; it would be precisely the same with ourselves; we have boxes of fossils in the cellars; we do not speak of those as being exhibited to the public.

2076. Have you any doubt that if the Society had the means at its disposal, a larger number of those fossils would be exhibited?—I said I did not know how many they had packed up, but that those exhibited were comprised in one case only.

2077. Would not it have been a very fair inference to draw from your statement, that they had no other specimens but those exhibited in that one case, particularly when you connected it with the fact that you had numerous cases?—I have no reason to doubt that they have others; I may say, that I know they have others packed up, and I think it advisable that they should have cases to display them. The more they have the better; I should prefer their collection to be arranged upon the different plan which I have mentioned.

2078. The fact that you only saw one case of Carboniferous fossils, arises from the poverty of the institution in regard to means for exhibition, rather than from poverty of fossils?—I conclude so.

2079. You have alluded to Professor Haughton's evidence; if I understand you correctly, you stated that you would wish to see a collection of the minerals and rocks of the country arranged according to the districts in which they were found, and according to the order of the strata in which they were found?—It is absolutely necessary for the purposes of the geological survey, that we should have such an arrangement.

2080. That is one way of arranging it?—For practical geology it is the only way.

2081. You think that there should be a similar collection of rocks and fossils arranged biologically also?—Of the fossils only.

2082. The two would convey a full and perfect illustration of the crust of the earth?—The two systems of arrangement are necessary for anyone who wants to have a perfect idea of all the relations of the fossils.

2083. Professor Haughton says, "It is for the interests of science, and illustrative of the history of the earth's crust, that all the fossils should be brought together, and arranged according to their zoological affinities without reference to where they came from;" is not that an accurate representation of one of the modes of arrangement which you yourself have recommended?—I should say it is for the interests of "physiological" science, that all the fossils should be brought together and arranged according to their zoological affinities, without reference to where they come from, but that that system of arrangement is "not" illustrative of the history of the earth's crust. The arrangement that would be illustrative of the history of the earth's crust, would be a stratigraphical arrangement.

2084. I understand you to say that the double arrangement would be perfect; that if you had a collection of rocks, stratigraphically arranged, and also a biological arrangement, the two together

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together would be complete?—I think you misunderstand me; what I said was not rocks, but fossils; that there should be two collections containing duplicate specimens of fossils; one, arranged stratigraphically according to the relative super-position of the rocks from which they were derived, and the other arranged without reference to the stratigraphical order of the rocks from which they were derived, but biologically.

2085. You think that Professor Haughton, in this description, has omitted one word; you agree generally with him, when he says, "It is for the interest of science, and illustrative of the history of the earth's crust, that all the fossils should be brought together and arranged according to their zoological affinities, without reference to where they come from;" but you think that he has not sufficiently defined the branch of science to which he refers?—No; I entirely disagree with part of it; I only agree with part of it.

2086. What part do you agree with?—That it is for the interests of science, providing you put in "physiological" science: that all the fossils should be brought together and arranged according to their zoological affinities, without reference to where they came from. But I should say that that arrangement is not illustrative of the history of the earth's crust. In order to make a collection of fossils illustrative of the history of the earth's crust, they should be arranged stratigraphically, and with especial reference to the places where they come from. That is one reason for keeping up the two museums in Dublin. The Museum of the Royal Dublin Society, like the British Museum in London, should exhibit their fossils together with the remains of living animals; whereas our museum in Stephen's Green, like the museum at Jermyn-street, should exhibit the fossils stratigraphically, which is the proper arrangement for the practical applications of geology. Take, for instance, such a thing as a Trilobite. There are a great number of species of Trilobites. The physiologist wishes to show the relations between the extinct order of Trilobites and other crustacean animals that now exist; and also other crustacea that have existed. To a practical geologist it matters very little whether the Trilobite was a crustacean animal, or not; he takes it as indicative of a particular position of certain rocks in which ordinarily Trilobites are found within the British Islands. For instance, supposing in some black shales, appearing to be precisely the same, perhaps, as you get in the Coal-measures, you found a fragment of a Trilobite, you would know at once that it would be utterly useless to sink for coal there. It is enough for the practical geologist that he meets with a Trilobite; he does not care to know the particular species of the Trilobite, or what are its exact relations to existing crustacea.

2087. You are in the general charge of the collection of fossils and rocks collected under the Geological Survey?—Yes.

2088. What is your official designation for that duty?—I have no official designation for that particular work, except as Local Director.

2089. Is there any salary attached to it?—Yes, my office of Local Director of the Geological Survey under Sir Roderick Murchison is my principal office, and the salary now commences at 400 *l.* a year, and increases by 25 *l.* per annum to 600 *l.*

2090. You are under Sir Roderick Murchison?—Yes; his title is Director General of the Geological Survey of the United Kingdom.

2091. You are his representative in Ireland?—Yes, as Professor Ramsay is in England.

2092. Did I rightly understand you to say, that when you were appointed, you stipulated that you should be appointed Lecturer on Geology?—Not stipulated. I understood, as a matter of course, that I should be so appointed. It was always understood among us that when the museum in Jermyn-street was completed, the Local Director of the Survey of Great Britain should lecture there; and, similarly, that when the museum in Dublin was completed, the Local Director of the Irish branch of the survey should lecture there, and receive an appointment as lecturer, basing it upon this, that the whole three things, viz., the geological survey, the two museums, and the lecture system in the two museums, were all intended to be connected parts of one original plan.

2093. In Jermyn-street, which is one of the museums to which you allude, the lectures are confined specially to mining subjects and kindred studies?—Yes; geological subjects.

2094. Mining is their special study, is it not?—No, it is only one branch. The actual method of mining is under one professor, and only a part of his time is devoted to giving lectures upon the art of mining.

2095. What is the special province of the establishment in Jermyn-street?—It is "The Royal School of Mines, and Museum of Practical Geology."

2096. Is not the special object of it mining?—I should rather say the special object was containing collections for the use of the Geological Survey. It is necessary that the officers of the Geological Survey should have a museum, whether private or public, in which the collections that they make should be arranged systematically for their reference. They require to make continual reference to them in the course of the prosecution of the survey.

2097. I will read a passage out of the Commissioners' Report, page 29:—"One exception has been made in England to the general rule that the teachers of science are not to be retained on fixed salaries by the government. Mining industry is considered to be of such an exceptional character, that a school of mines is supported by the Government in London, on the understanding that it is to be made as technical and as self-supporting as possible." Does not that passage convey that the primary and principal and sole object in the contemplation of the Government of the establishment in Jermyn-street, which is the one referred to, was education in connection with mines, and all the kindred sciences bearing upon it?—If you include everything that may possibly come under the term "mining industry," it would comprise chemistry, mineralogy, mechanics, physics, geology, palæontology, and the nature of rocks. Everything that is taught in our institution, is, more or less, necessary for instruction in mining. You could not have a complete School of Mines without including all those branches of education that are given in the Jermyn-street Museum.

2098. What is the difference between the museum in Dublin and the museum in Jermyn-street?—

street?—Simply that we were never allowed to have the same number of professors as they have in London.

2099. At the museum in Dublin, is the instruction which is given directed to any other subject than those here specified?—No; we have not been allowed to be developed to the extent that they are in Jermyn-street.

2100. You think it is necessary that you should have the same number of professors in the establishment in Dublin as they have in Jermyn-street, in order to make as complete a school as they have in Jermyn-street?—Yes.

2101. Does the establishment in Dublin direct attention, in any cases, to other subjects than those which are studied in this country?—No lectures have ever been given with reference to other subjects than those upon which lectures are given in Jermyn-street.

2102. You use the word "Lectures:" the question I asked you was, does the establishment in Dublin direct its attention to other subjects than those embraced by the establishment here?—In the Museum in Dublin there is a gallery containing the zoological and botanical collections made by the Ordnance Survey under the late General Portlock; and also there is a gallery containing animal and vegetable products and manufactures. Those two galleries, out of the six galleries in the Museum, contain objects such as are not included in the Jermyn-street Museum.

2103. Then the establishment in Dublin does direct its attention to subjects not studied in the museum in Jermyn-street?—Yes.

2104. The lectures given in Jermyn-street are lectures strictly of a scientific character, and strictly applied to the scientific pursuit of what comes under the head of mining industry?—Yes; if you give the proper extension to the meaning of the term "mining industry," that is, everything associated with mining; not the mere extraction of minerals out of the earth, but the seeking for them, and understanding where they are, and the reasons for their being there.

2105. Does the establishment in Jermyn-street extend its instruction to smelting and that sort of thing?—The most eminent metallurgist of the United Kingdom has his metallurgical laboratory there.

2106. After you were appointed as Local Director of the Geological Survey of Ireland, you were subsequently appointed lecturer on geology to the Museum of Irish Industry?—Yes.

2107. Like any other professor there?—Yes; I believe we were all appointed simultaneously.

2108. The geological collection is exclusively under your own control?—The rocks and fossils, not the minerals and ores; we hand those over at once to the Director of the Museum. Whenever I can get good specimens of minerals or ores, from any part of Ireland, I hand them over to Sir Robert Kane, to put among the rest of the collections of ores and minerals.

2109. One part of the gallery is specially appropriated to the use of the Geological Survey, and under your control, is it not?—No; it is rather that cases are specially appropriated to us; nobody would perceive any distinction in going through the Museum. I keep the key of the cases containing the rocks, because I am always wanting to refer to them; therefore, it would be very inconvenient if I had to go and look for anybody else to get the key. Besides which, I am responsible for their arrangement. In Jermyn-street Mr. Trenham Reeks is the General Curator of the Museum, but it was specially stated in the Report of the Committee of Inquiry into Public Offices in the year 1854, that it is the opinion of the professors "that no single person could be found who could be competent to undertake a detailed arrangement of the whole, and that each of the professors ought to have the special care of that part which relates to his own department:" that is obvious, I think. Therefore, Professor Huxley has the care of the fossils; the specimens of rocks are under Professor Ramsay; the metallurgical specimens are under Dr. Percy, and the mineralogical specimens are under Mr. Warington Smyth, while Mr. Trenham Reeks acts as General Curator.

2110. Are the officers you have named (Mr. Warington Smyth, Professor Huxley, and the others) officers of the Geological Survey, or of the Science and Art Department?—Professor Huxley is Professor of Natural History in the School of Mines, and also naturalist of the Geological Survey, and Professor Ramsay is Local Director of the Geological Survey. Dr. Percy never was an officer of the Geological Survey, he is merely professor of metallurgy in the School of Mines. Mr. Warington Smyth was formerly mining geologist to the Geological Survey; but since he has had the Duchy of Cornwall placed under his superintendence, he is obliged to give up that; he could not devote the time to it, and he is now simply professor of mining and mineralogy. Dr. Percy and Mr. Warington Smyth have now no direct connection with the survey.

2111. Have they any charge of the objects of the survey?—All the minerals collected by the survey are put into the mineralogical collection, under Mr. Warington Smyth, as professor to the museum. There is an intimate connection between the museums and the survey; there is very little distinction made, except that we have not, as officers of the survey, men competent to take all the departments, and therefore certain other scientific men are associated with us, as special professors.

2112. Mr. Warington Smyth has now no connection with the survey?—No.

2113. And yet he is in charge of the whole of the specimens collected in the survey?—Only minerals and ores.

2114. He has them under his care?—He has the keys.

2115. Are they in his care; is he responsible for them?—No; I should say he is only responsible for their arrangement. Mr. Trenham Reeks is responsible for their custody to the director, and the director is responsible, of course, to the Government.

2116. In the case of Dublin you have exclusive control over your rocks?—Yes.

2117. Who has the control or care of the minerals and fossils?—I have the entire care of the fossils also; but as I do not profess to understand palæontology, Mr. Baily, one of the senior officers of the survey, who is there on account of his special palæontological knowledge, has the keys of the cases in his office, and he has the care of the arrangement, together with myself.

2118. Who is responsible for their safe custody?—The responsibility of their safe custody would devolve upon Sir Robert Kane, as Director of the Museum.

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2119. Is he an officer of the Geological Survey?—No; but the museum being, in reality, the museum of the survey, and he being made Director of the Museum, and resident there, either by himself or by his substitute of course it is in the resident officer that the actual custody of the thing resides.

2120. If the rocks, minerals, and fossils were all transferred to a separate building, the museum being continued as it now exists, who would have the custody and care of them; who is the officer in Ireland responsible to the Geological Survey for their safe custody and care?—I would take them into my own custody.

2121. You are at this moment responsible for them, you being the principal Geological Survey officer in the country?—Yes; there has been no arrangement made about their custody, because it was not supposed that they are in any danger; the rocks and fossils are in my charge, as substitute for Sir Roderick Murchison. I am entirely under the orders of Sir Roderick Murchison as regards the survey; it is under him that the collections are made; we bring them to the museum, we name them and arrange them, and so on; we take them into the museum, and keep the keys of the cases, and most unquestionably if there were any question about their disposition, I should be the person responsible for it; but as regards minerals and ores, I hand them over to Sir Robert Kane, because there is no special object in keeping them under my control.

2122. Would it not be preferable that the Geological Survey of Ireland should be in an establishment by themselves?—No; I do not think it would; I do not see why it should not go on as in Jermyn-street; why, for instance, the collection of rocks and the collection of ores should not be in the same building and the same room as the collection showing the dressing of ores and the results of metallurgical processes, such as a few selected manufactures of metals, or manufactures arising from the earths, namely, pottery and glass.

2123. Would not the latter branches of science which you have just alluded to be rather accessories to your collection than that your collection should be accessories to them?—Certainly.

2124. Would it not be better that the proceeds of your Geological Survey should be in one establishment by itself?—All those things which we collect upon the survey should be kept together; and I think it is very advisable that they should be supplemented by specimens of processes of manufacture, and of the ultimate results of manufacture being placed alongside of them, always bearing in mind that I am speaking now of mineral products.

2125. Do I rightly understand you to say, that in the Museum of Irish Industry, the rocks are arranged stratigraphically?—No, the fossils are; the rocks I have arranged according to their nature, not according to the order in which they happen to lie in the earth; for instance, I arranged all the granites together, all the greenstones together, all the igneous rocks together, all the sandstones together, all the clays together, and the limestones together, without reference to the position in which they lie in the earth.

2126. The fossils are arrranged stratigraphically?—Yes.

2127. Are they also arranged biologically?—No; and it seemed to me that when the Royal Dublin Society come to arrange and display their collection of fossils it would be very useful if they would adopt the biological arrangement which Professor Haughton speaks of here, while we adopt the stratigraphical arrangement. The two things would then give complete instruction in practical palæontology.

2128. Seeing that you have both classes of specimens under your own control in the museum, how is it you have not made that arrangement already?—We have no room; we should require double galleries.

2129. What extent of the existing museum do you occupy; do you occupy a third or a half, or what?—The existing museum consists of two stories, each story has two long side galleries and one shorter cross gallery. The two stories are divided in this way: Everything organic, that is to say, everything that had life formerly, is in the upper story, while all the inorganic specimens are in the lower storey. Included in the inorganic products there are building stones, minerals, ores, coals, glass and pottery; all those are in the direct custody and control of the Director of the Museum, so that in that lower story it is only the rocks which are in the custody of the officer of the survey.

2130. What proportion of the existing museum does your whole geological collection occupy?—In the lower story we occupy about a third of one of the galleries (I am speaking now of our rock collection), and in the upper story we occupy the whole of one of the galleries with the fossils; but the general geological collections occupy the whole of the museum, except one large gallery upstairs, and one cross gallery.

2131. Mr. *Waldron.*] You mean except the upstairs gallery, in which the specimens illustrating the silk and cotton manufactures, and so on, are placed?—Yes, except that gallery and the cross gallery, the collections are exactly similar to those in Jermyn-street.

2132. Sir *Edward Grogan.*] You have left very little space for the exhibition of other specimens belonging to the Museum of Irish Industry?—It was Sir Robert Kane who arranged it.

2133. You were asked, with regard to the distribution of duplicate specimens, what is the system or principle upon which they are sent to the places you mentioned?—I do not know that any principle has been laid down; but, of course, nobody would care for them except scientific bodies, embracing geology as a part of their pursuits; therefore we send our duplicates to London, to be put into the Museum in Jermyn-street.

2134. That is as a branch of your own establishment?—And so to Edinburgh.

2135. Is that a branch of your own establishment?—No; all Great Britain is one branch, and Ireland is another branch; but as a museum is being built in Edinburgh, as there exists a Natural History Museum, and a very celebrated one, at Edinburgh, and as the survey is going on in Scotland, which will collect specimens which will be put into that museum, we have, of course, always set aside a set of duplicates for transmission to Edinburgh.

2136. You have also sent them to some of the colonies?—Yes.

2137. For the use of scientific bodies?—Yes.

2138. Under what direction, or on what principle, is this distribution made?—There has been no principle, simply because we have not yet got into a sufficiently advanced state to enable us to undertake

undertake such a distribution of specimens upon a large scale, and therefore no principle has been laid down. But, many years ago there was an order to the Director from the Government of the day, that we should send sets of specimens to the three Queens' Colleges, and accordingly that has been done.

2139. There is an order to that extent; is there an order with regard to sending the duplicates to the other establishments you have alluded to?—I do not recollect seeing such an order in any book, but it was spoken of as a matter of course. I found when I went over to Ireland that they were interchanging specimens; Sir Henry De la Beche would direct that certain things should be sent to London, and others would be sent from London to Dublin.

2140. You send them to Edinburgh, because there is a collection of rocks and minerals there?—Yes.

2141. Why do not you send them to the Royal Dublin Society, next door to you, where you knew that there is also a collection of rocks and minerals?—Because I never had directions to send them there.

2142. Have you ever had any directions to send them to Edinburgh?—I cannot say that I ever got any written directions, but we have always understood that we should get from Scotland specimens of Scotch rocks and fossils whenever we might want them; and that we should also make preparations for sending specimens to Edinburgh. We never have sent them yet.

2143. You seem to be sending duplicates all round the world, in preference to sending them to the Royal Dublin Society, which is close to your doors. Under what authority, or by whose direction, has such a distribution been made. Is there any written direction or authority you can refer me to?—If any officer of the Royal Dublin Society had come to me and said that they wanted certain duplicates, I have no doubt I should have asked Sir Roderick Murchison whether I should send them, and he would have said, "Of course;" but I never got any application.

2144. Did you ever get any application from Scotland?—No, certainly not, but they would be in the charge of the survey in Scotland; they are part of ourselves.

2145. I understood you that they were not. I understood you to say that there was but one survey for Great Britain, of which Sir Roderick Murchison was the head, and that therefore they had not a collection there?—No; the case is this: when the Museum in Scotland is complete, I believe those collections made in Scotland by the Geological Survey will be kept there; and they will expect to get duplicates from London and Dublin.

2146. Would not it be equally natural that duplicates should be sent to the Royal Dublin Society, an institution which is close to you?—No, because at Edinburgh they are part of ourselves. The local Director of the Survey of Great Britain will have an office in Edinburgh, I should suppose.

2147. You mentioned that you sent them to Australia?—No; that I hoped we should.

2148. You said that you had sent some to foreign countries?—To India.

2149. Have you sent any to any continental society?—We sent a collection once, I think, to Dresden; that was because Dr. Geinitz sent us a very valuable collection; we sent him an exchange.

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2150. Mr. *George.*] Were you ever directed not to send them to the Royal Dublin Society?—No, the question never arose except in this way. The Royal Dublin Society once made an application for our maps and publications. It was first of all made as a private application from Dr. Steele to myself. I said I could not conceive that there could be any objection, but I should like to be officially authorised, and if they would make the application in writing, I would forward it to Sir Roderick Murchison for authority; I did accordingly, and the answer I got was that he had no power; that the Treasury were most terribly strict about our giving a single publication away, without the order of the Treasury; and he said that he had no power to furnish the publications; but he supposed that if an application were made to the Treasury, there would be no objection; I believe they did make the application to the Treasury, and the answer they got was, that those maps were to be bought at the agents, and that they might go and buy them; that was not our fault.

2151. That applied solely to the maps?—Yes.

2152. No application has been made, formal or otherwise, with regard to specimens?—No.

2153. That is your explanation why they have not been sent?—Yes, but I could not undertake to send them immediately, even if application were made, because we have not been able yet to master our back accumulations. For many years I was making constant application for an officer who could arrange the specimens, which application was always refused by the Government.

2154. Mr. *Waldron.*] We understand you to say that there was no direction, written or verbal, that duplicates should not be given to the Royal Dublin Society?—Certainly not.

2155. The only thing you wish us to understand is, that you never got directions to send them, and that you were not asked by any officer of the society to do so?—No; I did not know that they wanted them.

2156. Sir *Edward Grogan.*] The chairman put some questions to you on the supposition of the fusion of the two institutions, as was recommended by the Commissioners, the particular branch with which you are connected being continued and transferred to the Royal Dublin Society: you raised objections to that, and you said that you would not like to be under the control of the Council; you moreover stated some hypothetical cases which you thought might arise, which would render that connection disadvantageous to the public and unpleasant to yourself: have you any knowledge of any such cases ever having occurred before?—When you ask me for knowledge, I can hardly put it so strongly as that, because whatever may have happened before, has never dwelt upon my mind. Things, no doubt, have happened that have produced the impression upon my mind that I should particularly dislike to be under the Council of the Royal Dublin Society. I have that impression strongly upon my mind; but I would say that I should have almost equally as strong, if not quite as strong an objection to be under any other similar body anywhere. I am an officer in the public service, and I am very happy to serve under any other officer of the public service; but I entirely object to having that officer of the public service superseded

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seded and myself to be put under the direction of persons not officers of the public service.

2157. You went a great deal further; you specified hypothetical cases; I ask you why did you specify those hypothetical cases?—Because I think that would be the natural result in any similar body.

2158. Have they ever occurred to your knowledge in the Royal Dublin Society?—No; certainly not to my knowledge.

2159. Then it is a pure supposition on your part that such cases might happen?—Yes; but I am sure such things would be likely to happen, and I have always been under the impression that the probability is that they would happen. I do not want to say anything offensive, but I can see in the Proceedings of the Royal Dublin Society traces of action on the part of the Committees and Councils of the Royal Dublin Society which were annoying to the professors.

2160. Do you mean professors in the Museum?—No; professors in the Royal Dublin Society under the old plan; and I must say that I have heard from good authority in Dublin that the professors formerly under the Royal Dublin Society were subject to a very annoying action on the part of the members of the Committees.

2161. What is the period to which you refer?—Before the year 1854, when the whole affair was under the management of the Royal Dublin Society.

2162. We are speaking of the Royal Dublin Society as it exists now, and your answer a short time ago related to things as they exist at present?—Yes.

2163. Will you give me an instance of any such hypothetical case as you refer to, which has ever arisen under the existing system?—It could not have arisen, because the professors have not been under them.

2164. Why do you refer to a hypothetical case, arising under a state of things not now existing?—I think what occurred before would be likely to occur again.

2165. Without going into the particulars of the annoying action on the part of the Royal Dublin Society towards the professors, to which you refer, you admit that it occurred under a different state of things to what now exists?—It occurred when the professors were under the control of the Council and Committees of the Royal Dublin Society; it could not occur when they were not under them.

2166. Of course you are on very intimate terms with your own director, Sir Robert Kane?—Yes.

2167. He was a professor under the Royal Dublin Society?—Yes.

2168. Have you ever heard him make any complaint or observation of that kind whatever?—No.

2169. Would not it be natural if such a thing had occurred, that you would have drawn direct information from him?—Yes; I never felt sufficient interest in the thing to make inquiries from him upon the point.

2170. I should not have asked you these questions unless you had referred to the possibility of certain cases occurring; I ask you, whether any such case has ever occurred within your own knowledge, or whether you have heard of any such instance from any professor connected with the establishment, who must have experienced it, if it existed?—Since the year 1854, I have not certainly; because it could not occur.

2171. Mr. *Waldron.*] Your answer refers to the period before that time?—Before 1854, of course. When the scientific professors were under the Royal Dublin Society, I do not think they treated them well or worthily; and, looking through the Proceedings, it can be distinctly shown that they did not; I only say as regards the Royal Dublin Society, I should anticipate, if I were to be placed under it on the footing on which the professors were formerly placed under it, a recurrence of similar treatment.

2172. Mr. *George.*] You are aware of the change in the constitution of the society ten years ago?—I do not know how far it goes; my feeling is very largely derived from reading through the Proceedings of the Royal Dublin Society previous to 1854.

2173. Sir *Edward Grogan.*] Previous and subsequent to 1854 there have been several gentlemen who have held the office of lecturers of as high scientific attainments as any getlemen to be found elsewhere?—Yes.

2174. How is it that those gentlemen never started those objections?—I rather think they did.

2175. You have already told me that Sir Robert Kane has never communicated to you any complaint on his part, or made any observation upon that question?—No.

2176. Are you acquainted with Sir Richard Griffith?—Yes.

2177. Did he ever communicate anything of the kind to you?—No, certainly not; quite the reverse.

2178. Did you know Mr. Higgins who was connected with the Royal Dublin Society?—No.

2179. Nor hear of his character?—Very little, except that he was a very eminent man.

2180. Did you know Sir Charles Giesecke?—No; I was not in Ireland till the year 1850; I never saw him.

2181. With reference to the names I have mentioned, there is no question I presume that no men could stand higher in scientific attainments or station than they did?—No; and therefore I do not think that they should have been subject to the treatment they were, in the matter of their salaries.

2182. Had the Royal Dublin Society any control over their salaries?—Yes; for this reason: they inform them in one part of the Proceedings that they were afraid they should not be able to continue their salaries in consequence of the grant being diminished.

2183. I understand that your complaint relates to the society intimating to the Professors that there would possibly be a reduction (which I believe actually took place afterwards) in their salaries?—That is part of it.

2184. What is the next part?—They reduced their salaries, and I think without sufficient reason. I think that with men of their stamp they should have done anything else rather than reduce their salaries.

2185. What is the next complaint?—You will find in the proceedings a recommendation of a Select Committee of the Council as to the duties of the professors, which, I must say, seem to me very absurd; the Council resolved this in 1842, that in addition to the two courses of lectures given by the professors, they shall give such others as the society shall see fit; and that they shall

shall draw up syllabuses of all their lectures, which shall be submitted to their several committees before publication; and that it is the duty of the professors to read scientific papers to the evening meetings. The same thing may occur again.

2186. Why do you say that the same thing might occur again?—For this reason: in the case I am mentioning, it is evident that the resolution of the Council was the result of their want of acquaintance with scientific matters; they would never have made such a resolution had they been a council of scientific men; they would have known the absurdity of the thing. As a man of science, I object to be put under the control of anyone not of my own profession, in the same way that a soldier or sailor would object to be placed under anyone not in his profession.

2187. Do I understand that the plan which you would desire should be adopted is this, that the control and direction of the lectures, which you, as a scientific man, are to give in Dublin, should be under the sole control of another scientific man, like yourself?—Certainly.

2188. Were you at any time lecturer under the committee of lectures?—Yes, they never interfered; it was a mere *pro formâ* thing.

2189. Have you any reason to complain of the manner in which they conducted the administration of the lectures?—No, they never interfered.

2190. Is it customary for the lecturers at the Museum of Irish Industry, preparatory to the delivery of the course, to prepare a syllabus and submit it to the committee of lectures?—Yes, there is a regular prospectus drawn up.

2191. Consequently there would be nothing unusual in the Royal Dublin Society exercising such a function?—Nobody ever asked me for a syllabus of my lectures for approval before publication.

2192. Is not it what is done at this moment?—Certainly not. I should object to any man interfering with the syllabus of my lectures.

2193. How are the lectures arranged?—We all arrange in council with the Director as to the number of lectures, and as to the times when they should be delivered. With reference to this, it occurs to me that Dr. Sidney, the other day, in his evidence, said that it was part of the stipulation in the appointment of the professors, that they should give 52 lectures. I must say that there was no stipulation on my appointment as to the number or character of the lectures I should give. The arrangement as to the number of the lectures is entirely our own, in consultation with the Director, he sitting as our head; and we arrange our various courses among ourselves, as we consider best for the public, and according to our own mutual convenience. Then our knowledge of the existence of this committee imposed upon us the necessity of so modifying the lectures which we proposed to give, that they should meet the approval of the committee. There being that committee in existence, we specially arranged the courses, so that there should be no collision between us, and so that the committee should have something committed to it and that it should appear that we are acting under them; but, in reality, we never were at all.

2194. You arrange the programme of the course of lectures in a particular manner, because you think the committee of lectures might object to it, if it were not so arranged; is that programme laid before the Director, or do you send it to the committee of lectures?—So far as regards the number of lectures, and the times at which they shall be given, and with regard to the places in which they shall be given, all that is laid before the committee; but that is a different thing from a syllabus of the lectures giving the heads of the subjects to be lectured upon. I should object to anyone demanding to see my syllabus for approval.

2195. Are you well acquainted with the manner in which the professors at Cambridge are elected?—I am a Master of Arts of Cambridge, and member of the Senate.

2196. You were asked some questions about the professors being elected by the Electoral Roll at Cambridge; what professors are so elected?—I really do not exactly know; I believe the professor of mineralogy, the Woodwardian professor of geology, the professor of botany—

2197. The professor of chemistry?—The professor of chemistry, I believe; several of the professors; they were elected originally by the Senate; every Master of Arts, who had a vote for the University, had a vote in the appointment of those officers; then it was found that the throwing of those open to the whole Senate was inconvenient, because any man might whip up a number of country clergy and other people, who had not kept up their connection with the University, in order to get a particular person appointed; therefore the establishment of the Electoral Roll was a restriction upon the old system of election to this extent, that only those should have a vote who were resident at the University and engaged in the instruction given there. It was a restriction upon the old system, in order to place the power in the hands of those who were most directly interested in keeping up the character of the University, and most absolutely dependent upon the character of the University for their own income; and who therefore had the greatest interest in having the most efficient professors elected, and were also the persons who, by their pursuits, were the best calculated to form a judgment.

2198. To all intents and purposes it was a popular election by the members of the Senate of the University?—No; by those members of the Senate continuously resident in the University.

2199. The number of those members being about what?—I suppose what was stated by Dr. Sidney was correct; he stated that the number was 260, I think.

2200. You have no reason to dispute that statement?—No; Dr. Sidney has told me that he derived it from Dr. Lloyd, who had just been at Cambridge.

2201. Have you any reason for believing that the members of the Senate, who elect those professors, are themselves, all of them, professional men?—They all are or have been professors or tutors of colleges, or lecturers.

2202. Are you sure that they are perfectly well versed in those particular subjects in which they elect professors?—They need not be well versed in the particular subjects; it is merely accidental as to whether many of them would know much about geology, for instance, but they would be so much interested that they would take care to appoint the best man they could possibly get.

2203. They

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2203. They have succeeded in doing so, but it is a popular system notwithstanding?—To the extent I have stated.

2204. It is an improved system under the recent alteration?—It is an improvement upon the old, looser and more popular election of a large and miscellaneous body.

2205. Have you any reason to believe that that system has failed, or been productive of injury to the advancement of science in the university?—Certainly not.

2206. It has worked well there?—I should say so.

2207. Why should not it work elsewhere?—The same system applied to the same sort of men would work well anywhere.

2208. You heard the evidence given by Dr. Sidney on this subject; have you anything to add to what he said, or do you dissent from the statement made by him?—I have this to say, I do not see the connection between the elections taking place under such a body as that and the elections of scientific men on the part of the Royal Dublin Society. If the Council of the Royal Dublin Society had been professors previously, and could only become members of the council in consequence of their having been professors, they would then become a much more analogous body to that of the electoral roll.

2209. Have all the members of that electoral roll been professors?—They have all taken part in education.

2210. Are they all teachers?—They are all tutors or professors, or have been tutors. No man resides in the university for the purpose of leading an idle life; it is merely the tutors of the different colleges who continue resident there, some of whom take professorships, and some become masters of colleges, who may then no longer be said to be actually engaged in tuition; but they all have been engaged in tuition.

2211. Supposing the geological department and the lectures connected with it to be maintained in full efficiency, as you consider it to be now, or its efficiency to be increased by additional lectures, and to be transferred as the Commissioners recommend to the Royal Dublin Society; what objection would you see to that arrangement; would it not in an educational point of view be beneficial to the community?—I do not see what benefit could be derived from the transfer of the geological survey and the museum and the lecture system to the Royal Dublin Society.

2212. Would it be beneficial to the community in an educational point of view to transfer to the Royal Dublin Society the educational functions which the Geological Survey are capable of exercising?—I think that the transference to the Royal Dublin Society would diminish rather than increase its benefit to the public.

2213. You have already told us that you are under the Committee of Council on Education?—Yes.

2214. You unfortunately differ with them in that opinion then?—If they have expressed that opinion, I should differ with them, decidedly.

2215. One of their confidential officers was on this commission, who recommended the transfer?—It is very difficult to give a definite answer to questions founded in that way upon passages in this report, because I have already said I do not wish to say anything offensive to either of the estimable gentlemen who formed the Commission, but they do show throughout the report such a want of acquaintance with the subjects reported upon, and they so entirely avoided seeking for information from those who were able to give it, that the recommendations are very difficult to understand in many parts, and I entirely object to almost all their recommendations.

2216. Mr. Adderley, who was formerly Vice-President of the Council, has stated his opinion very distinctly upon the subject of an amalgamation, and you dissent from his opinion?—Yes.

2217. So far as the Department of Science and Art goes under which you are placed, they have decidedly expressed their opinion through him, so far as he is the representative of their sentiments?—He spoke as having been Vice-President of the Committee of Council on Education.

2218. Would not that Department be under him?—Yes.

2219. Therefore, as the superior of the Department, he expressed that opinion?—Yes; I am entirely opposed to the statements contained in Mr. Adderley's letter, and I think I could show him reason for altering his statements and opinions as expressed in that letter.

2220. You dissent from his opinion, at all events?—Yes.

2221. Are you aware that the Right Honourable Mr. Lowe, recently at the head of that Department also, so far concurred with Mr. Adderley's view as to entertain the opinion that it would be advisable to transfer to the Royal Dublin Society the Department of the Museum of Irish Industry?—He seems to have concurred with Mr. Adderley.

2222. The two heads in succession of this particular Department recommend the adoption of a particular course in which you entirely differ from them?—Yes.

2223. Mr. *George.*] Are you responsible to any one in the exercise of your duty as Lecturer in the Museum of Irish Industry?—Certainly.

2224. To whom?—To Sir Robert Kane, as director.

2225. Is it the case that though Sir Robert Kane would not, in the exercise of his discretion, interfere with your syllabus, or anything of that kind, there is an understanding that the line you adopt is palatable to him, and that he does not object to it?—I am quite certain that neither Sir Robert Kane, nor any other scientific man, would think of objecting to any passage in the syllabus of the lectures of any professor, unless he saw reason to believe, that from want of information, he was about to make a scientific misstatement.

2226. He trusts to the knowledge, and skill, and discretion of the lecturer, that he would select proper topics, and lecture fittingly on them?—Yes, even supposing it were a question upon which there might be a difference of opinion between the professor and Sir Robert Kane, I do not think the professor would allow him to interfere.

2227. If he disapproved of the general scope of your lectures, or the mode in which they were carried out, would he have power to object?—If he objected, and maintained his objection, it would come to this, either the professor or he would have to retire from his office.

2228. You are to a certain extent responsible to him as the director of that institution?—I am responsible to him for giving the lectures at the time arranged.

2229. He himself being responsible to the Department of Science and Art?—Yes.

2230. Of

2230. Of course you are under direct and supreme control?—Yes; any action between myself and the Department of Science and Art goes through the Director, Sir Robert Kane, so far as my office as lecturer is concerned, and through Sir Roderick Murchison so far as my functions as Local Director of the Survey are concerned.

2231. You are not impatient of all control?—I am willing to be placed under all proper control; I have served under various officers at home and abroad, officers in the navy, as well as others, and none of them ever found me in the least insubordinate.

2232. I understand you to dissent in strong terms from the statement and opinions of Mr. Adderley?—As contained in that letter appended to the Report of the Commission.

2233. By the expression "double services and double buildings," and so on, do you understand him to mean that there are two staffs, two lectureships, two collections, and two sets of buildings?—He seems to regard the staff as two sets of persons.

2234. You understand him to mean by that, not that they were identical staffs or identical lectureships, but that they were in fact two, one in the Royal Dublin Society and one at the Museum of Irish Industry?—Yes; I can easily understand that Mr. Adderley was extremely puzzled by our arrangements, but that was not our fault, for they were made by the Department.

2235. Was he not justified in using that expression "double"? Is there not a collection of minerals in the Royal Dublin Society's Museum?—Yes.

2236. Is there not a collection of minerals at the Museum of Irish Industry?—Each museum contains a collection of minerals.

2237. Is not there, therefore, a double mineral collection, though not perhaps precisely identical?—Certainly.

2238. Is there a lecturer on mineralogy in the Royal Dublin Society?—Yes, Professor Scouler, by an arrangement in 1854, was to retain his lectureship, and lately Mr. Scott has been lecturing as his substitute.

2239. He is acting as professor of mineralogy within the walls of the Royal Dublin Society?—Yes.

2240. You, I believe, hold a similar office in the Museum of Irish Industry?—I do not lecture on mineralogy.

2241. On geology?—Yes; nobody lectures on mineralogy at our institution, but there ought to be a professor of mineralogy.

2242. At all events, there are two sets of collections?—Yes; but there are very few duplicates among them, not nearly so many as there ought to be.

2243. Are not those collections in connexion with the same science of geology and mineralogy?—Yes; but we have only a very small collection of minerals, comparatively, merely for certain practical objects which we must have.

2244. Notwithstanding that there are those two collections, you have expressed a strong dissent from the statement of Mr. Adderley, that there are double collections, and so on, in the two places?—Yes; because I think, in the way he puts it, anybody would suppose that everything was double, arrangement as well as collections.

2245. Do you suppose, when Mr. Adderley used that expression, he meant to imply that they were purely duplicate collections at the two places (that is to say, that there were the same specimens and the same objects in each) or that he meant simply to imply that there were analogous collections in each of those two institutions?—He seems to have been under the impression that the collections were identical in the two places.

2246. Does he say so?—He says, "Double staff, double lectureships, double collections, double building and fitting grants, double services of all sorts, kept up by aid of national taxation for identical purposes."

2247. You also dissent strongly from the Report of 1862, signed, amongst others, by Sir Richard Griffith?—Yes.

2248. You dissent from that as strongly as you do from the letter of Mr. Adderley?—Yes.

2249. I observe that the Commissioners state that "two institutions and two systems of instruction having the same general objects in view are in concurrent operation:" is not that precisely the same thing, in substance, as Mr. Adderley expresses in his letter?—Yes, I think it is; and I dissent from that just as much as I do from Mr. Adderley's letter.

2250. They say also, "The geological and mineralogical portions of the two museums are illustrations of the same science;" do you dissent from that?—No; they are separate illustrations of the same science.

2251. Is it not the case that both the Commissioners and Mr. Adderley object that there should be duplicate illustrations or double illustrations of the same science in those two different places?—Possibly it is, but I think they were entirely unaware that double collections are necessary, either in the same institution or in different institutions.

2252. I need hardly ask you your opinion of Sir Richard Griffith; there is no man of more ability in almost every branch of science that he has undertaken?—Certainly.

2253. With the very full knowledge of geology and mineralogy and everything of that kind which he must possess, must he not have known perfectly well what he was expressing his opinion about with regard to those two museums being illustrations of the same science?—I think if he had considered the matter well, and had been writing himself, he would not have used such an expression.

2254. Do you think that Sir Richard Griffith has, after the examination of the witnesses called before that Commission, deliberately put his hand to a paper containing an opinion which he would not have expressed if he were writing a treatise upon the subject on his own account?—It comes very much to that, I must say.

2255. Do you consider that this report of the Commission, signed by Sir Richard Griffith, does not express the real or *bonâ fide*, or the true opinions of Sir Richard Griffith at all; do I understand you to go to that extent?—I should be sorry to say that; it would seem to be rather reflecting upon Sir Richard Griffith, which I should be the very last person to do.

2256. Would you suppose that a man like Sir Richard Griffith could be influenced by any motive whatever in putting his name to that report, if he did not believe its contents to be true, and the opinions expressed in it well-founded?—No; I can readily conceive that he took it for granted; but I also believe that in discussion with Sir Richard Griffith, if the thing were placed before him in a different light, he would not agree with the opinions expressed in that report.

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2257. You think that if Sir Richard Griffith had a full discussion with you on the matter, he might be induced to change the opinions which, in 1862, he deliberately formed and put his hand to?—So far as that goes, decidedly I do.

2258. Mr. *Waldron.*] You mentioned, I think, that the specimens of ores and minerals that came to you after being "determined," were sent to the curator or director of the Museum of Irish Industry?—Yes.

2259. Do you determine their chemical constituents?—No; it is part of the duty of the chemist of the Museum to do that.

2260. For all purposes of estimating the value of minerals, is it not necessary to determine what their constituents are?—Certainly.

2261. Was not it part of the original object of the Museum of the Geological Survey that that should be done by the chemist who was appointed?—Yes.

2262. Has that always been done from the commencement?—I cannot say that it has; as regards ores, we do not very often want them analysed for the purposes of the Geological Survey; we notify the fact of mines being in a particular district; we mark the course of a mineral vein, for instance, upon our maps, and give its general contents, and send specimens up to the Museum, so that they should be publicly exhibited; anybody who has an interest in knowing the precise richness of the ore might then ask for an analysis of it.

2263. The specimen, after you have examined it, is sent down to the Museum?—Yes.

2264. It is ticketed there as a specimen of ore from a certain district?—Yes.

2265. Is it not desirable that the per-centage of metal in that ore should be stated?—Yes.

2266. Was not that contemplated from the beginning?—Yes, it is being done.

2267. In all cases?—I do not know that it is done in all cases; but it has been done in some. I think it has been done in the case of a good many of the ores of iron. It would not convey very much practical information; because, say it was galena, or ore of lead, or copper pyrites, the actual richness of that particular specimen of ore would not convey much information as to the richness of the mine; that would depend rather upon the bulk of the ore than its richness; a large bulk of poor ore is very much more profitable than a small bulk of rich ore. In one case, in order to get out of the ground a small portion of rich ore, you have to remove a great quantity of worthless rock; but in the other case, supposing that everything you removed was worth something, that is to say, that there was a great mass of poor ore, but the mass was so large that the mere extraction of one part of it gave facilities for extracting the remainder, and every ounce you got out was worth something, then that mine would be more valuable than a small amount of rich ore in a mine where the material through which you had to cut to get at the rich ore was worthless.

2268. In all cases where it is desirable to have a chemical analysis of the ore made, is it made?—I cannot say that it has always been done; but in any case where it is desirable, of course it should be done.

2269. Is it done?—No, I do not believe it is; because, in many cases, there is no particular object in having an analysis.

2270. It is done in cases where it is desirable?—As regards ores, I do not know, because, when we get those ores, we hand them over to the director of the Museum, and he deals with them.

2271. Do I rightly understand you to say that you have materials in your own department at the Geological Survey Office for furnishing the public with detailed reports as to any particular part of Ireland which has been surveyed?—Yes.

2272. Did I rightly understand you to say, that with a very small addition to the grant, you could, at a small expense, give the public all the information that they desired?—Yes. The way we go to work is this: we take the six-inch townland maps into the field; we examine the ground minutely; we see every quarry, every road, every cutting, every mine, or other similar thing, and we enter them in the precise locality upon the six-inch map. We use certain marks to show the direction of the rocks or veins; we use certain colours for showing the formation, and we write a succinct description alongside of it. We keep those maps as data maps, showing everything that was to be learnt in the district at the time we made the survey; and we have duplicate copies made of them, and keep both copies in the Geological Survey Office in the Museum of Irish Industry. We have therefore the data for giving a complete geological report upon that district at the time the survey was made. By means of the heights marked on the six-inch map we can draw sections in any direction, so as to show what is underneath the surface to the depth of many hundred feet, whether limestone or sandstone, and so on. So that if any landed proprietor, or any person whatever, one for instance who wished to purchase an estate, came to us and said, "Will you give me a geological map and section and report upon such and such a townland, or such and such a parish in such a county," we could furnish him, from materials in our office, at a comparatively slight cost, a more complete report than he could get from any independent geological or mineral surveyor. Because the latter would have to do what we have already done in surveying the neighbourhood before he could give a trustworthy report, and the greater his experience in the neighbourhood, the more valuable would be his report: we have already the materials; so that even if an independent professional man were to be sent down to a certain district, his most natural course would be to come to us to get preliminary information to enable him to examine the district.

2273. Have you formed any rough estimate of what addition to the grant would enable you to give the public such information?—No, I never have; but, supposing the Government thought it desirable to introduce such a system, if they gave us two or three more surveyors, and if we had another room in the Museum of Irish Industry adjoining to that which we now have, that would be all that would be required. The giving of those reports, under the existing state of things, would simply retard the work of the officers of the Survey. If we were to undertake to do it, there might arise such a demand for those reports that we should be entirely occupied in drawing them out.

2274. Have you ever been in that part of the National Gallery to which it was proposed to remove the collections of the Geological Survey?—Yes.

2275. Are you of opinion that the space there available would be sufficient for the purpose of the collections of the Survey?—No; we could store

store them in boxes there; we could not arrange them.

2276. Do you know the capacity of the rooms there?—No; I have never measured them; they are unfinished.

2277. Is one of them 110 feet by 40 feet, and the other 100 feet by 40 feet?—I should not have thought they were so large; I am a bad judge of dimensions.

2278. Would that space give you sufficient room for your specimens?—How far we might display a selection of the specimens, I do not know, and what collections we should take there I do not exactly know. My idea would be that if we were removed, we should take with us all in the Museum of Irish Industry, except the animal and vegetable products; three-fourths, at least, of the objects in the Museum of Irish Industry, should go with us if the Geological Survey were removed; therefore they would require as much space as they now occupy in the Museum; but, besides that, we should require other rooms for the offices; there is only one little back room at the National Gallery besides the two large ones you mention.

2279. You said that the Commissioners of 1862 did not seek for information from those who could give it?—Yes.

2280. I think you rather complained that you had not been examined?—I only stated it as a fact.

2281. Do not you consider that Sir Robert Kane was competent to give all the information which the Commissioners required with regard to the Geological Survey?—Certainly not.

2282. Had it not been constantly talked about that the Geological Survey was to be removed?—If so, there were no questions asked about it.

2283. Was not Sir Robert Kane competent to give all the information required about it?—No, I do not think he was.

2284. You were at Cambridge at the time the commission sat?—Yes.

2285. Did you write from Cambridge to say that you wished to be examined, or did you offer yourself for examination?—No; I did not know what they were going to inquire into, and should certainly never have thought of obtruding myself upon commissioners who did not think it necessary to send for me.

2286. You came over to Dublin, hearing that they were there, to tender yourself as a witness, but you did not previously write to say that you wished to be examined?—No; while I was away I heard the inquiry was going on; I had arranged to be at Cambridge at the British Association, and I rather hurried back, and when I got back, I heard that the inquiry was ended.

2287. I have a statement before me of the number of sheets of the Geological Survey which are completed, and which is dated March 1863; have you made much progress since then?—We have published two new sheets, and one or two explanations since then, but the survey on the six-inch map is going on; you cannot judge of the progress of the survey by its publications during any one particular time.

2288. When do you suppose it will be completed?—A few years ago that question was asked me officially, and I then arrived at the estimate of 25 years from that time with our present force; but I must say that anything of that kind is very vague, because nobody knows the kind of rocks that may be met with; the rocks in the north-western part of Ireland are of a kind that has never been thoroughly examined anywhere in the world, and nobody knows how long they will take us. Moreover as we go on with the Geological Survey we introduce improvements in the nature of our operations; I must say also that it appears to me that the Geological Survey is indefinitely extensible. The scientific examination of the earth is just as inexhaustible as that of the heavens, and therefore when you speak of the completion of the operations of the Royal Observatory you may begin to talk of the completion of the operations of the Geological Survey; but that is a question for the next generation rather than for us. The survey will go on, because each successive generation will derive advantage from its contiuance.

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2289. You appear to think that it is not desirable to have what are called popular lectures at all?—Not gratis lectures; my experience is, that gratis lectures are really very undesirable.

2290. You say you would like to see some test applied to the persons attending the lectures, to prove their interest in them, by imposing a charge of 6 *d.*?—Yes.

2291. Do not you think the presence of artisans, and people of that class, in a lecture room, is a more decided evidence of interest in a course of lectures, than the paying a fee of 6 *d.*?—I do not; I think many people going by, and seeing the gas lights, and ascertaining that a lecture is going on, will come in quite casually, and children come in at those gratuitous lectures. If it was understood that artisans were expected to come in their working dress, for instance, and that they were entitled to come upon the payment of 6 *d.*, I think they would be much more likely to come; they would rather stay away, if they thought they were intruding upon a company of well-dressed ladies and gentlemen.

2292. Your evidence, as I understood it, went to show that they did not stay away, but that they came in crowds?—Yes; where they pay 6 *d.*, as in Jermyn-street, but very few artisans attend in Dublin.

2293. You said that persons got no benefit from coming to a museum once; why do you assume that persons only go in once for curiosity?—That was in answer to the statement in the report, that few people visit two museums; "many persons visit one museum; few take the trouble to visit two; by collecting all our objects, therefore, in one museum, they will be seen by more people than if they were divided between two."

2294. You say that persons coming to a museum once derive no benefit from it?—Very little.

2295. You spoke of crowds visiting a museum out of curiosity, and you had in your mind people who only went in once, and never came again. Is not it the fact that numbers of people study different matters at home, and go to the museum afterwards to see how far what they have read is borne out by the specimens in the museum?—Yes, some no doubt.

2296. Why should you assume that amongst the crowds visiting this museum there are not numbers so circumstanced that they may not be able to give the time necessary to attend lectures?—I did not assume that at all; what I was saying was, that persons who went merely to a museum once to gratify curiosity, derived very little good from it, and that you could not call upon the Government to support such a museum, or require that it should be supported out of the national funds merely for curiosity seekers. It is not the duty of our Government to provide either *panem* or *circenses* for the people.

2297. I see

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2297. I see by the paper that lectures have been given at the Museum of Irish Industry by the Solicitor General, Mr. O'Hagan, and others; were you any party to that arrangement?—No; it was merely a private set of gentlemen who got up a course of lectures, and asked Sir Robert Kane for the use of our theatre when it was not occupied by anybody else, it being a convenient place to give lectures in.

2298. It had nothing to do with the Museum?—Nothing whatever.

2299. The persons attending that course would not count in the returns as attending the Museum?—No; our porters or attendants were not in attendance; two gentlemen of the Committee were in attendance to regulate the admissions; we have nothing to do with them.

2300. Sir *Edward Grogan.*] You stated that you are a member of the Senate of Cambridge University?—Yes.

2301. You are, of course, thoroughly conversant with the system which prevails there of lending books from the library to members of the university?—Yes.

2302. Will you shortly state what that system is?—I believe every graduate of the University who is a member of the Senate is entitled to take 30 volumes at a time out of the University Library, on the condition of returning them at the end of the quarter. I am not quite clear whether the privilege is available to every graduate, supposing he does not keep his name on the University boards.

2303. If he retires from the University altogether, then it is doubtful whether the privilege continues?—Yes, notwithstanding his being a graduate; but if he is a member of the Senate I am quite certain that he is entitled to take out 30 volumes.

2304. Is that privilege largely availed of?—I think very largely; I have availed myself of it upon an occasion when I wanted to write a sketch of the physical structure of Australia. I sent from London to the University of Cambridge for all the travels that had been published with respect to Australia; and I do not know where I should have got them if I had not got them from the University Library.

2305. So that, except for the privilege which exists at the present moment in that library, you might have been unable properly to complete the report on which you were engaged?—Yes.

2306. I presume other gentlemen writing on scientific subjects value the privilege equally with yourself?—I think so. I recollect speaking of this very thing to Professor Sedgwick a year or two ago in Cambridge, in the University Library, the Librarian being present, and I was speaking of it in connection with the restrictions that prevailed in the University of Dublin with respect to their library; and I recollect Professor Sedgwick saying that they would rather lose half the books in the library than that they should be stored up in the library without being made use of.

2307. His impression was that the circulating principle made the books generally useful to the members of the Senate, and that it was so valuable a privilege that he would even run the risk of losing half the books than that the privilege should not exist?—Yes.

2308. Have you heard objections raised to that system?—I never heard objections raised to it; losses take place occasionally, but few of any importance.

2309. Mr. *Dillwyn.*] Have you never heard complaints on the part of readers who have not been able to get access to a book which they have come to consult?—The same thing would happen, supposing the borrowing-at-home system did not exist; if a reader in the library was already in possession of the book, the other man would have to wait till he had done with it.

2310. Mr. *George.*] Can you keep the entire number of books three months?—Yes, 30 volumes.

2311. Mr. *Dillwyn.*] A reader requiring a volume which had been lent out, would have to wait three months instead of an hour or two?—He would have to wait till the first man returned it, but supposing they were only allowed to be read in the library, and a reader were in possession of a book, and supposing another man came in and wanted that book, he would not be able to get it.

2312. He would have the chance of getting it when the other had done with it?—He would not know when that would be.

2313. *Chairman.*] This library is exclusively for the use of the University?—Yes.

2314. And exclusively paid for by the University?—Yes; except that I believe it partakes of the privilege of getting a copy of every book that is published, which I think has been commuted into some allowance; but I forget how that is.

2315. Do not you think there is a considerable difference between a library which is paid for by a university, the books of which are lent to the members of that university, and a library paid for by the public, who sustain inconvenience in consequence of the abduction of those books?—Yes; I know that in Jermyn-street no book is allowed to be taken out of the Museum, for this reason, that they are supposed to be working books only, books wanted for the work going on in the institution, and therefore requiring to be always on the spot. You may look upon those books in the light of instruments; but supposing a general student wanted to investigate any particular subject, and he was away from the place, I think it highly important that he should be able to send to some place where he could get works upon that particular subject for use in his own study.

2316. Would you attach such a privilege as that to a library paid for by the public?—If it were a large library; I believe the books are lent out in the Advocates' Library in Edinburgh.

2317. Sir *Edward Grogan.*] Do you know anything about the system which prevails in the library of the British Museum, with respect to the setting aside of books for the use of readers?—No book is allowed to be taken out of the library, except works for the use of the officers of the Museum; but although readers cannot carry books away from the library, they can ask that certain books should be reserved for them till the next day.

2318. Mr. *Lefroy.*] Would there be any difficulty in making an arrangement at the Royal Dublin Society in respect of books lent out, so as to ensure the Society against the loss of the books?—It would be very easy to make an arrangement so that the members of the Society should be obliged to give back the books or replace them.

2319. Mr. *George.*] Are you aware that when anyone borrows a book from the Royal Dublin Society, the member gives a ticket, undertaking to be responsible for the care of the book, and to return it within a fortnight if wanted by any other

other reader?—I should suppose that every library that lends out books adopts a similar plan.

2320. Mr. *Lefroy.*] As to the collection of minerals in the Museum, do you think it is desirable that the collection of minerals collected by the Survey should be analysed?—It is very desirable that the rocks should be analysed; it is not of much use analysing distinct minerals, because their constitution is known, but it is very important that many of the rocks should be analysed.

2321. Has there been any, and what provision made for that being done?—It is part of the duty of the chemist at the Museum, as a public officer, to make such analyses for the Survey, as the Director of the Museum orders him to do.

2322. Have those analyses been made?—No; upon one occasion I wanted an analysis of some rocks made, and I sent them in, but there was some difficulty apparently about its being made in the laboratory of the Museum, and the analyses were not made.

2323. Who is the chemist?—Upon that occasion it was Mr. Galloway.

2324. Sir *Edward Grogan.*] Did that only occur in one case?—The instance I am alluding to was the last, at all events.

2325. Have there been other instances?—There have been other instances in which the analyses were not completed, but I do not know that in those instances the analyses were very important; we thought, if there was any difficulty about it, or if it was disagreeable or inconvenient, it was not, perhaps, of sufficient importance to insist upon it very strongly.

2326. Mr. *Lefroy.*] Is not that one of the most important duties of the chemist connected with the Museum?—I think it is.

2327. Sir *Edward Grogan.*] Did the delay or the non-performance of this duty arise from the pressure of other duties?—I suppose it may have done.

2328. Mr. *Lefroy.*] What is the difference between the fees charged for a course of lectures given in Jermyn-street and the fees charged for a course of lectures given in the Museum of Irish Industry?—A very great difference indeed; for instance, the highest fee ever charged for lectures in the Museum in Dublin is something like 3 *s.* 6 *d.*, except for certain lectures that have been given in a class, for instance, in the laboratory where apparatus has to be provided, and also certain zoological lectures where microscopes are required; but usually something like 3 *s.* 6 *d.* is charged, whereas in Jermyn-street a student entering has to pay 20 *l.* or 30 *l.* We have never been allowed to develop ourselves properly, so as to take in men who should come there to receive their professional instruction, remaining with us the whole working part of the day, through a series of two years; there has been merely one lecture a day, a few persons coming in in a casual way and getting what we gave them, and going away; in Jermyn-street a man enters himself as a matriculated student, and pays high fees, and even for separate courses of such lectures, for instance, as the lectures on geology, persons who wish to attend merely that course pay two guineas, I think.

2329. Sir Robert Kane stated in his evidence that the attendance at the lectures in the Dublin Museum is much greater than the attendance in Jermyn-street; do you not attribute that in part to the great difference in the fees paid?—Most unquestionably; but more than that, the persons who attend in Jermyn-street are persons who really have a desire to acquire this instruction for professional or practical purposes; whereas with us we have no means of ascertaining whether that is the case with the persons attending or not.

2330. If the suggestions you have made to the Committee were carried out, would you hope that you would be able to carry out, to some degree of perfection, the course in the Dublin Museum?—If not to some degree of perfection, to a high degree of practical utility.

2331. You object to acting under the Council of the Royal Dublin Society, in the first place, on private grounds, and, in the second place, on public grounds; your private reason is quite understood; your public reason appeared to me to be this, that you did not consider that the council was composed of that class of scientific men that would make you feel at ease in acting under their direction or control: would not that objection apply to the Board of any University equally, the members of which are not necessarily versed in the different scientific subjects embraced by the University?—I did not go sufficiently into my objection as regarded the public service; my special reason, as regarded the public, was this, that if you wished to establish a really useful system of instruction in practical science, it requires the constant attention and supervision of a regularly-trained person to look after it, to be always on the spot to afford assistance and advice, and to manage the thing. The council of the Royal Dublin Society, who only meet once a week, or something of that kind, could not exercise that constant supervision which a single officer could, and therefore it would be almost a sham and a mere make-shift system, doing something that was not injurious, which would do, perhaps, a little good; but you could not get the same amount of practical utility out of a desultory and casual plan as you could out of a regularly-organized system, with a definite officer at the head of it.

2332. If the council could be improved considerably, do not you think that it would be a suitable head for giving instruction?—I do not think you could get out of any council selected out of a body like the Royal Dublin Society a good working body, so far as regards instruction, which requires the constant supervision and attention of a man who has not only capacity, but who has been trained for his work.

2333. If the Council were men who valued instruction, would not they take care that the lectures were given by the most efficient lecturers, and that all the other arrangements were efficiently carried out?—They could not always be on the spot. Supposing anything arises in the course of the day; supposing a question is asked by one of the students, or difficulties arise between two of the students, or some new arrangement is required, you would have to assemble the council and wait some days, instead of going into a room and asking the Director.

2334. Your objection arises from the mode of constitution of the council?—I say the same objection would apply to any body of that kind; I should have one man at the head, just as you have a colonel at the head of a regiment; you could not command a regiment by a committee of civilians.

J. B. Jukes, Esq., M.A., F.R.S.

31 May 1864.

On looking over the proof of the evidence I gave before your Committee on the Scientific Institutions of Dublin, I found that I had omitted one subject which is of sufficient importance, and sufficiently removed from all controversy, to induce me to ask your permission to lay it before the Committee by letter.

I mean the great ignorance that still exists as to the laws of occurrence of those mineral deposits from which the ores of the metals are derived, especially of those which are usually called "mineral veins." Our knowledge even of the facts connected with these is very scanty; in proof of which assertion I would refer to an article in the last number of "The Mining and Smelting Magazine," by the editor, Mr. H. Curwen Salmon, in which you will see it correctly stated that even these mere facts have never yet been fully and accurately described in any book in the English language, nor, so far as I am aware, in any other.

Geologists cannot observe these facts for themselves, since to do so it would be necessary to spend their lives in the mines. Miners, on the other hand, cannot, for want of a knowledge of theoretical geology, describe the facts so as to be clearly understood by geologists, and must often fail to observe, with sufficient accuracy and completeness, facts which would be of critical value in the investigation of the laws of occurrence of mineral deposits. Mining men often contemn geologists as mere theorists; but it is obvious that it is only when we know the reasons why these deposits occur in some places and not in others, and the causes of their comparative richness or poorness, that we shall begin to learn where to look for them with any certainty, or to anticipate their value with any probability. At present, miners and geologists are alike ignorant of these reasons and causes.

Every facility, therefore, ought to be given to persons intending to follow mining pursuits, to acquire a really sound knowledge of geology and its associated sciences.

It may probably happen that these facilities may be in existence for many years, and a new generation of miners spring up before they become convinced of the value of this knowledge; but when once science and practice are thoroughly united, the results, even in a mere money point of view, are almost sure to become in this, as in other things, far greater than even the most sanguine venture to anticipate.

To the objection that Ireland is not a rich mineral country, and therefore does not require anything like a school of mines, I would reply that she is relatively at least as rich as France, and that in proportion to the scantiness of the natural wealth is the increased necessity for its being managed with the utmost skill and economy.

I would also add, that whether the skill and knowledge acquired be put into practice in Ireland or in other parts of Great Britain or in the colonies, or the world at large, appears to me a secondary consideration. The primary object appears to me to be the taking advantage of the peculiar facilities which the Museum of Irish Industry could afford, to give instruction in some branches of practical science to such of the youth of Ireland as may be likely to become mining captains, mining engineers, or surveyors, managers of metallurgical works, or to follow other similar pursuits.

The smelting works of Ballycorus, the vein-mines of Wicklow, and the collieries of Queen's County, and the adjacent counties, are all within such easy reach of Dublin as to enable a student to supplement the instruction given in the Lecture-theatre and Museum, by inspection of practical operations actually at work.

Jovis, 2° die Junii, 1864.

MEMBERS PRESENT:

Mr. George.
Mr. Gregory.
Sir Edward Grogan.
Mr. Lefroy.
Sir Colman O'Loghlen.
Sir Robert Peel.
Mr. Waldron.

WILLIAM HENRY GREGORY, ESQ., IN THE CHAIR.

LORD TALBOT DE MALAHIDE; Examined.

Lord *Talbot de Malahide.*

2 June 1864.

2335. Sir *Edward Grogan.*] YOU have been Vice President of the Royal Dublin Society for many years?—I have.

2336. And you have taken a good deal of trouble and interest in its operations?—I have.

2337. Of course, your attention has been called to the change in the constitution of that Society, recommended by the Commissioners of 1862?—Yes.

2338. Does that meet with your approval?—It does.

2339. Do you approve of the manner in which it is proposed that the Council in future should be elected?—Yes.

2340. Does the absolute power which the Council would then possess meet with your approval likewise?—Certainly.

2341. From your experience of public bodies, do you approve of the principle that there should always be a large remanet of members left on the Council, and that a third only should retire periodically?—Certainly.

2342. Leaving two-thirds who have acquired experience of the affairs of the Society to carry on the management?—Certainly.

2343. Your lordship has taken great interest in the agricultural exhibitions of the Society?—Yes, I have.

2344. Have you personally taken a part in the management of them?—I have generally been an exhibitor, and, therefore, of course, I have not taken an active part in the management of the shows.

2345. Has the value of those shows been brought under your Lordship's special notice in any manner as tending to improve the breed of animals?—I believe they have been gradually improving; I believe the spring show of the Royal Dublin Society is second to none as an exhibition of short-horned cattle; and that has generally been the opinion given by the English judges, who have attended in order to award prizes to the successful competitors.

2346. They have expressed an opinion to you that the shows do great good?—They have expressed their admiration of the show, and stated that nowhere were there finer specimens of short-horned cattle to be found.

2347. Is it a fact, as reported, that some of these judges have repeatedly made purchases of your Irish stock, for the purpose of improving their own?—Certainly.

2348. The spring show is for breeding stock exclusively, is it not?—Not exclusively, but principally.

2349. Has it come to your knowledge that a desire for a summer show for the exhibition of sheep has been expressed?—There has been a movement on the subject.

2350. What would be your opinion as to the advisability of establishing such a show?—My own impression is, that at present it is not required. The annual meeting of the Royal Agricultural Society takes place in the summer, and generally at that there is a good show of sheep, and I should be afraid that the one would clash with the other.

2351. You are one of the Council of that Society?—Yes.

2352. There is no difference of opinion nor conflict of interest between the two Societies?—They have worked very harmoniously together.

2353. Mutually co-operating and mutually assisting each other?—Certainly.

2354. There has been a great change of late in the part of the Royal Dublin Society premises, in which the shows are held, by covering in the yard?—That has been a great improvement.

2355. Has that, in your opinion, tended to the success of the shows?—It has been a very important improvement, for many reasons. In the first place, the cattle are much better taken care of, and less exposed to the action of the weather; and, in the second place, the spectators are protected, which is a very important matter in the case of a show; because the success of a show very much depends upon the weather; the chief funds at the disposal of the Agricultural Committee are derived from the money taken at the doors, and that varies very much according to the aspect of the heavens. It also has been a considerable improvement in the premises of the Royal Dublin Society, inasmuch as they have been able to dispense with the lawn, which used annually to be cut up very much by the cattle and the implements which were exhibited.

2356. That hall was constructed altogether by private subscriptions of members and friends of the Royal Dublin Society?—It was entirely constructed by subscriptions of members and by a certain grant from the Society.

2357. By its being covered in safe from the effects of the weather, a greater number of visitors have been attracted to the shows than under other circumstances could have been anticipated?—Yes.

Lord *Talbot de Malahide.*

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2358. Does your Lordship expect that those shows will be hereafter entirely self-supporting, so as not to require any assistance from the funds of the Society?—I should hope so.

2359. Each show surpasses the other in interest and in attendance, I believe?—I do not know about the attendance; it varies according to the season, but certainly the shows are not going down in any respect.

2360. In looking through your Lordship's evidence before the Commissioners, I find you mentioned the want of some increased accommodation for the effective display of the machinery sent over to the shows; what steps have been taken by the Society for the purpose of providing that accommodation?—They have purchased a considerable space between the premises of the Royal Dublin Society and Kildare-place, called Shelbourne-yard, which has been a very great accommodation to the Society. When I say purchased by the Society, I should say it was purchased by an individual connected with the Society; and the Society are in hopes that the Government will enable them to relieve him from the liabilities he has incurred.

2361. In making the application to Parliament for some additional pecuniary assistance, that object was not overlooked?—Certainly not.

2362. That is part of the grounds of the application, and included in them?—Yes.

2363. The building was partially covered in at the late show, was it not?—It was.

2364. The weather was very bad, was it not?—Yes; some part of the time it was very wet.

2365. And the real value and necessity of such a building was practically demonstrated upon that occasion?—Certainly. We have lately been able not only to house the cattle, but also the sheep, which is a very important matter.

2366. It is found to be almost as important that the sheep should be under cover, as in the case of the cattle?—Yes.

2367. There is a third show, the winter show, is there not?—There has been, the last few years.

2368. Has that been successful also?—Not to the same degree as the other.

2369. The winter show is for fat cattle, analogous to the one in London at Christmas, is it not?—Yes; but it has been found that the Society have it not in their power to give prizes sufficiently tempting to induce so many exhibitors to send their fat beasts as would have been desired.

2370. If our anticipations of increased funds from the improvement of the shows should be realised, there would be no difficulty in meeting the point you speak to?—Certainly; it is all a matter of speculation.

2371. In connexion with the Agricultural Shows of the Dublin Society, there is a Museum attached, is there not?—There is a very interesting Agricultural Museum for models and specimens of cereals and roots, and also a very large collection of agricultural machines.

2372. Where is that collection exhibited?—It is exhibited in the building adjoining Shelbourne-yard.

2373. Which were formerly the hay lofts of the ducal residence?—I was not aware of that; I think it very probable.

2374. The collection is exhibited in premises not convenient or exactly desirable for such an exhibition?—No, the room is quite full now; there is not much opportunity for addition to the collection.

2375. Is it within your knowledge that many visitors resort to that Museum to inspect the several specimens and implements?—I believe so; there is a very intelligent Curator who has the charge of the Museum.

2376. Any person applying to see it would apply to him, and he accompanies them through it, I believe?—It is open generally; there is no occasion for him to accompany them, but of course if they wish to see him, he is ready to give any information in his power.

2377. What is his salary?—I forget the exact amount of his salary; I think it has been raised lately.

2378. The agricultural department, in your opinion, is one which it is most important that the Society should carry out in its fullest efficiency?—Yes.

2379. It was one of the original objects of the Royal Dublin Society, was it not?—Yes.

2380. The improvements proposed to be made in their show yards and in the purchase of this new yard are all with that object and tending in that direction?—Certainly.

2381. Is there not a Professor of Agricultural Chemistry connected with the Society?—Yes.

2382. Whose duty it is to make analyses of soils, waters, manures, and so on?—Yes, everything connected with agricultural chemistry.

2383. Are his services in great request?—I am not aware of the number of applications made to him to make analyses.

2384. Does he lecture on agricultural chemistry?—Yes.

2385. Are his lectures largely attended?—I have not often had an opportunity of attending them; but I believe that they are.

2386. Can you imagine any one species of learning of greater importance to the people of Ireland than a thorough instruction in the principles of agricultural chemistry?—I believe it is of the highest importance.

2387. Therefore, you would anticipate the happiest results from anything that would tend to increase the efficiency of that gentleman's department?—Certainly.

2388. Has there been any complaint of the insufficiency of the laboratory in which he carries on his analyses?—I think I have heard that the laboratories of the Society are not sufficiently supplied with apparatus.

2389. Would not the Society willingly supply the apparatus if they had the means?—No doubt.

2390. It is their poverty, not their will, which keeps the laboratories in their present condition?—I believe so.

2391. There is another subject which I wish to call your attention to, which is one of the greatest importance to Ireland, viz. the diffusion of a knowledge of veterinary medicine throughout the country. There was formerly a Professor of the veterinary art attached to the Society, was there not?—Yes. Many years ago Professor Peile lectured on veterinary practice for a considerable time, and there was a forge in which instruction was given to smiths in shoeing; and there was a wish to have founded a regularly appointed Veterinary College and Hospital for sick animals; but I believe the Society was never able to carry it out. Professor Peile, however, I believe, continued to lecture till he died, in the year 1825, when difficulties were experienced, and it was found

found that the funds of the Society were not sufficient to carry the veterinary department on as well as they wished, and it was given up.

2392. So that a department of which the value was fully appreciated was obliged to be abandoned for the want of funds to carry it on?—Yes.

2393. I believe, recently, attempts have been made to try and revive it?—Yes, several attempts. In the first place the endeavour was made to induce the Royal Agricultural Society to take it up, and the expediency of reviving it has been mooted at the Royal Dublin Society; but the financial difficulties were so great that it was found impracticable.

2394. There has been a recent movement in Ireland on the subject of the falling off of the breed of horses in the country; have you taken any interest in that subject?—Yes, I have. Unquestionably there is most incontrovertible evidence as to the falling off of the breed of horses.

2395. Was not there a show recently on the premises of the Royal Dublin Society, with the view of bringing that more prominently before the public?—Yes.

2396. With the object of exciting interest in the public in the falling off in the breed of horses?—Yes.

2397. Was that a successful show?—I believe it was exceedingly successful in this respect, that, it showed distinctly the inferior breed of horses in Ireland. I have been told by good judges, that with a few exceptions, it was not thought creditable to the country.

2398. Mr. *Lefroy.*] Is that falling off confined to any particular class of horses, or is it a general falling off?—It was ascertained by a committee which was formed in connexion with the Royal Agricultural Society, in which Sir John Power took an active part, that every day there were greater difficulties experienced in obtaining weight carrying hunters and horses fit for troopers or artillery horses.

2399. Sir *Edward Grogan.*] For the service of the State?—Yes. It was also shown that there was a great want of good stallions of the proper description, fit to produce weight carriers or troopers, and also that a great many stallions in the country were unsound; so that, in fact, instead of doing good, they were doing harm.

2400. Were those results exemplified at the show that was got up a few days ago?—Yes; in many respects those results were confirmed by what we saw at the show.

2401. Is there any reason for doubting that if similar encouragement and care were given to the breed of horses as have been given to the care of cattle of late years, the result would be an improved breed of horses?—There are considerable difficulties in reference to the horse question. In the first place, the best feature in the case is, that it is the general opinion that there is no want of good mares; so that if there were a sufficient number of good stallions, no doubt the breed of horses would be greatly improved.

2402. Would not a periodical exhibition, such as the one we are alluding to, tend very much to improve the breeding of those stallions?—I doubt it very much. I do not see well how it could do much to improve the breed of horses. In the first place, the prizes offered are so small as not to be any great inducement to English owners of horses to send their horses over, and there are very great difficulties connected with the stallion question. It was proved in evidence that there are comparatively few good horses bred by the small tenant farmers in Ireland, and that the new regulations for mounting cavalry have had a very injurious effect. Formerly three-year olds used to be brought, and now, except in one or two regiments, they only buy four-year olds, so that that is depriving the breeder of the advantage of being able to sell them at three years old, and subjecting him to the expense and risk of keeping them another year. All the cavalry officers examined were unanimous in condemning the present sytem. It was also suggested that the present system of Queen's Plates had been found to work badly. That it encouraged breeders to breed horses with little strength, just enough to carry off the prize of some of the races, in which they had very little weight to carry and a very short distance to run; and it was the opinion of many that it would be advantageous to horse breeding if an attempt were made to go back to the old system of having heavier weights and running greater distances, and at a more advanced age.

2403. Your Lordship has alluded to the opinions of cavalry officers on the question of the breed of horses in Ireland at present: has it come to your knowledge whether or not any difficulty exists with regard to obtaining remounts or young horses for cavalry purposes?—I am told that horses can be got for cavalry, but all the officers examined stated that there was much greater difficulty in obtaining them than formerly, and that in case of a war, or in case of any great addition being required to the cavalry force, it would be almost impossible to provide them.

2404. The quality of the horses, perhaps, is not so good as formerly?—There was no class that made so poor an appearance at the horse show as horses fit for troopers.

2405. Has any mode ever occurred to you in which the state could contribute towards the improvement of the breed of horses in Ireland so effectually as by the establishment of horse shows?—I do not think that those persons who have taken up the horse question have ever considered that that would be a mode of meeting the difficulty.

2406. The principal suggestion that appears to have been made with a view to improving the breed of horses, is an alteration in the rules under which the Queen's Plates are run for?—Other modes are suggested; I do not know with what chance of obtaining a good result; for instance, it has been suggested that we might adopt something like the Indian system, that the Government might guarantee a certain sum for a good stallion to go through the country, or to be available at certain points in the country.

2407. Whatever system may be adopted with a view to improving the breed of horses in Ireland, have you any doubt that the establishment of a veterinary school in Dublin, on the premises of the Royal Dublin Society, would be productive of great benefit to the community?—There is no question of it, and I consider that it is not merely with reference to horses that a veterinary college is required; it is quite as important or more important with regard to cattle. There is a very considerable deficiency in veterinary surgeons in the country parts of Ireland. If a veterinary college were established I should certainly be anxious to see engrafted upon it what has not been much attended to in any veterinary college that I am acquainted with, viz.: a class for giving instruc-

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tion to herds in the rudiments of veterinary medicine, in the same way as midwives are admitted at the lying-in hospitals.

2408. From your long connexion with the Royal Dublin Society, you are well aware, of course, of the different arrangements of its educational department?—Yes.

2409. You gave some strong evidence before the Commissioners in favour of amalgamation?—I have no doubt that it could be done. I do not believe that the Royal Dublin Society, or any person connected with the Royal Dublin Society, has ever suggested amalgamation; but I have no doubt if the Government threw the *onus* upon the Royal Dublin Society, they would be able to undertake the duties cast upon them.

2410. Were you a vice-president previous to the year 1854?—I think I was.

2411. Do you conceive that there is a very great analogy in the objects of the Royal Dublin Society and of the Museum of Irish Industry?—There certainly is.

2412. I will read a passage from your Lordship's evidence before the Commissioners: "If it is the feeling of the Government that this system should be amalgamated, I have no doubt that if the Royal Dublin Society is placed in funds, it will be prepared to undertake and carry out the teaching, which is now divided between the two places; have you any reason to alter that opinion?—No.

2413. Or have you any reason to doubt the capability of the Royal Dublin Society to carry out an effective system of education, if that amalgamation took place?—I do not see why they should not be able to do it.

2414. Your Lordship, in your evidence before the Commissioners, alluded to the establishment of a special school of mining and the arts; would you think that a school for instruction in that particular department would be of service to the country?—Certainly.

2415. Mining is becoming more and more developed in Ireland every day?—Yes.

2416. You think that the establishment of the Museum of Irish Industry might, with advantage, have its attention directed to that special subject?—Certainly.

2417. Leaving the other subjects to the care and superintendence of the Royal Dublin Society?—Certainly.

2418. *Chairman.*] I think in the year 1860 there was a meeting of the Royal Dublin Society, at which a recommendation was made for re-opening the veterinary establishment, and appointing a professor in connexion with a school of medical surgery?—Yes.

2419. Am I to understand from your Lordship that no action has been taken in connexion with that resolution, solely in consequence of the deficiency of funds?—I believe so.

2420. I think it was stated in that resolution of the Royal Dublin Society, that it was considered to be desirable, both for the credit of the Society and for the benefit of the community that such a branch of education should be established?—Certainly.

2421. I presume that your Lordship is of opinion that the alteration which has been going on in Ireland, in the conversion of tillage into pasture, renders such an establishment more important than ever?—Yes, I think so.

2422. The questions which are now arising with respect to the diseases of cattle, some of which have made their appearance in the country since the free importation of cattle, render a school of veterinary instruction of very great importance in a pastoral country such as Ireland is?—Certainly; I believe that Ireland of late years has been more subject to epidemics among cattle than it was formerly.

2423. You consider that an establishment of the description referred to would be able to give some instruction to persons having charge of cattle, would tend to dispel the faulty system of treatment too often at present pursued, and be the means of establishing a more salutary mode of practice among the people?—No doubt.

2424. I presume you would propose to appoint a professor of the veterinary art who should give lectures, and under him you would have persons connected with the practical part of the department?—There ought to be several professors. I forget exactly the staff that was proposed when the matter was under discussion. I think there were to be, at least, three professors.

2425. You would have a professor to lecture upon the anatomy and structure of animals.

2426. Upon their diseases and the mode of treatment?—Yes; *materia medica.*

2427. Embracing the diseases of horses, cattle, sheep, pigs, and all domestic animals, in fact?—Yes.

2428. You would have a forge for practical instruction in the art of shoeing, to which you attach, no doubt, very great importance?—Certainly.

2429. I believe that country gentlemen, as a general rule, are of opinion that the generality of smiths throughout Ireland are not such good shoers of horses as they ought to be?—I do not think they are.

2430. A great many valuable horses are ruined by faulty shoeing?—No doubt.

2431. From want of sufficient knowledge of the anatomy of the horses' feet on the part of those persons?—Certainly.

2432. I may ask you, in connexion with this subject, is there not a considerable nucleus at present in the Royal Dublin Society for the formation of a Veterinary Museum?—Yes, there is.

2433. Sir *Colman O'Loghlen.*] You propose that there should be a veterinary establishment in connexion with the Royal Dublin Society?—Yes.

2434. Is there any similar veterinary establishment attached to any public institution in England?—When the Royal Highland Society was formed, one of its chief objects was the establishment of a veterinary department; there is one still in Scotland, but I do not know how far it is connected with the Royal Highland Society.

2435. Do you know of any veterinary establishment now supported by the public funds, either in England or Scotland?—There is the Royal Veterinary College in London, and there are two Veterinary Colleges in Edinburgh. I do not know how far they are supported by the Government.

2436. Mr. *Waldron.*] Does the Royal Highland Society grant certificates to young men who have studied veterinary surgery in that Institution?—I believe so; that is to say, the Veterinary Institution, which was attached, and may still be attached to the Royal Highland Society, does give certificates.

2437. I believe that persons having those certificates

tificates are admitted into the Queen's service as veterinary surgeons in the cavalry?—Yes.

2438. Mr. *George.*] I believe there has been a shed erected over Shelbourne-yard lately for the purposes of the present Exhibition in Dublin?—There has.

2439. Is your Lordship aware of the terms upon which that shed has been erected; have you heard that that shed has been contracted for at an expense of 1,200 *l.* if retained, and for 600 *l.* if it should be ultimately taken away by the contractor, it being open to the Royal Dublin Society, if they should be able to find funds for the purpose, to keep that shed permanently erected for the sum of 600 *l.*?—I do not remember the exact sum; I believe there is some such arrangement.

2440. Is it your Lordship's opinion that that shed being kept permanently there, would be of very great value, not only with reference to manufacturing exhibitions and the exhibition of machinery in motion, such as is going on in Dublin at present, but for the agricultural shows?—Certainly.

2441. Has the Society any funds at its disposal out of which that 600 *l.* could be paid, in order to keep up that shed, unless aided by the Government?—I should not think that the Society have it in their power to purchase the shed out of their own funds.

2442. I understand your Lordship's opinion to be, that, under any circumstances, certain of the professors ought to be attached, and to continue attached, to the Royal Dublin Society, namely, the Professor of Agricultural Chemistry, and also the Professor of Botany, and the Professor of Geology?—I think so.

2443. Was it the opinion of those parties who took so much interest upon that question of the deterioration in the breed of horses, that the principal cause of the deterioration was the want of good sires?—It was one of the principal causes.

2444. You were asked a question upon the subject of the general change from tillage to pasture; would not that in a very considerable degree tend to diminish the number of horses, and, indirectly, the number of good horses in the country, there being a less number of horses required in farming?—That would only apply to a certain class of horses, because pasture land is better suited for breeding horses than tillage land.

2445. *Chairman.*] Your Lordship stated that you would retain the Stephen's Green Institution as a school of mining and the Arts. I presume your Lordship is aware that at this moment there is no Chair of Metallurgy and Mining in the Museum of Irish Industry?—I believe not.

2446. And you say you would propose to retain in the Royal Dublin Society the Professors of Agriculture, Botany, and Geology; if you give to the Museum of Irish Industry a School of Mines, would it not be necessary to connect the Chair of Geology with it?—Geology, of course, is very much connected with mining, but in many respects it is different; it is of a more popular character than mining.

2447. Do you think that you could carry out a School of Mining without a Chair of Geology?—I am informed that Professor Ramsay lectures on Geology at the Jermyn-street establishment.

2448. Mr. *Lefroy.*] From your long experience of the Royal Dublin Society, and of the important benefits conferred on Ireland by that Society, do you think there is anything in the constitution of the Society which makes it an unsuitable body to conduct scientific and literary lectures for the benefit of the persons connected with it, and for the benefit of the community generally?—I do not think there is.

William Edward Steele, Esq., M.D.; Examined.

2449. Sir *Edward Grogan.*] You are Assistant Secretary to the Royal Dublin Society?—I am.

2450. Since what period have you held that appointment?—Since 1853.

2451. Is it part of your duty to be present at all the proceedings of the Society?—Yes, and of the Committees also.

2452. I believe you were in the room when Mr. Maunsell was examined?—I was.

2453. Have you anything to add to, or correct in the statement he made with regard to the original constitution and history of the Society?—I may briefly state, with respect to the constitution of the Society, that the whole of the responsibilities and powers vests in the body at large; that the Council which was constituted after the Report of the Committee of 1836, is merely executive for carrying out the orders of the Society, but that it has no power to do anything of its own mere motion.

2454. It cannot originate?—It can originate; but it has no power to enforce the rules or regulations which it may pass.

2455. You are speaking of the Council as at this moment constituted?—Yes.

2456. Your attention has been directed to the proposed change, as recommended by the Commission?—Yes; by which it is proposed that the Council should be paramount, that the number of those elected by the Society at large should be increased, and that the Council should have nearly the same powers that the Society has at present.

2457. Did the alteration in the constitution of the Council, so suggested by the Report of the Commissioners, emanate from the Commissioners themselves, or was any suggestion made to them to that effect by a committee of the Society?—It was first suggested by a special committee of the Council, consisting of four members, who drew up a Report; and in that Report it was recommended that the Council should become the paramount body of the Society, having the control and election of the officers, and, in fact, exercising nearly all the powers that the body itself now exercises. The Commissioners had obtained a copy of that Report, and they extracted that portion from it which recommends this change, and adopted it with one slight exception. The Report of the Committee recommended that the five members retiring each year should not be eligible for re-election; but the Commissioners made an alteration in that; they thought it desirable that the members so retiring should be eligible for re-election. I believe it is the practice in the case of Railway and other Boards, that those retiring in order are eligible for re-election.

2458. That proposition, emanating from the

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Committee of the Council, I need hardly ask you whether it does not show that the Society do not entertain any great hostility to the proposed change?—No. Moreover, the Society have adopted that suggestion.

2459. This question has been under the consideration of the Society since that time?—On two occasions. When the Report was sent over from the Treasury, intimating that the Commissioners were prepared to carry the recommendations into effect, provided that the Society would adopt those changes, the Society passed this resolution: "That the Society hereby accepts the Report of the Treasury Commissioners, so far as relates to this Society, and is ready to adopt the changes as regards the constitution of its executive body, which the Commissioners propose.

2460. We have it in evidence that there has been no formal action on the part of the society at large, adopting any resolution of that kind since that period?—There was a deputation appointed, which deputation attended in London, and had an interview with the authorities of the Department of Science and Art on the subject; and, in fact, a draft of a new charter under the proposed constitution was prepared, which was printed and circulated amongst the members, and a special meeting was called to consider it; but on the day before the meeting a letter was received from Mr. Hamilton, of the Treasury, requesting that, as Parliament would inquire into the subject in a subsequent Session, the Society should take no action therein, and consequently the matter was dropped.

2461. That was the sole reason why this change was not carried out?—Yes; the sole reason assigned; because in the resolution they reiterated that they were ready to carry out the recommendations of the Commissioners so far as they related to the constitution of the Society.

2462. You believe that the Society are still willing to carry them out?—Certainly.

2463. Evidence has been given before the Committee with regard to the election of members. During the time you have been connected with the Society, have you ever known any case of any candidate being rejected, in consequence of his political or religious opinions?—Never; any one who is proposed is elected by the majority.

2464. Have you any reason to believe that sectarian or political considerations influence the members in elections into their body, or into the Council or the Committees?—As regards elections into their body, I have no reason whatever to believe such to be the case. On the contrary, I believe there is the most complete freedom from anything of that kind in the Society. And as to elections into the Council, I do not see how it can take place there; because the way in which the Council, so far as the nine members of the Council elected by the body at large are concerned, are chosen is this: any person in the Society is at liberty to propose, at the meeting before that at which the election is to take place, any person as a candidate for the Council, and their names are all submitted, according to a certain order, at a subsequent general meeting of the Society, and the Society then select whom they think best fitted to serve upon the Council. With regard to committees, the election is conducted similarly: the committees of each department prepare beforehand a list of members to serve on their committee for the next year, and eleven are chosen by the Society at large out of that list; and, as I have been present at the meetings of those committees, I know as a fact that no gentleman was ever rejected or named on such lists on account of his religious or political views.

2465. Is it within your knowledge that the committees have always worked harmoniously with themselves and also with the Society at large?—Certainly. I may refer to one instance in point: we had a committee consisting of eleven members, and I know myself of five Roman Catholic gentlemen being on that committee, and I never saw so much harmony and good-will manifested by any body of men as that committee manifested in the working of one of our exhibitions of manufactures.

2466. They were a mixed committee, as far as religious opinions were concerned?—Yes.

2467. You have told us how the committees are elected; will you state how the members are admitted?—They are proposed and seconded by any member of the Society at one meeting, and they are balloted for at the next.

2468. In the report of the Commissioners, do they recommend any alteration in the power of the committees?—No, none of the powers of the committees were proposed to be affected.

2469. Was any alteration proposed in their number?—No, the Commissioners did not recommend anything as regards the powers of the committee, or the number of their members. They recommended that besides the fifteen members elected by the body at large, each committee should elect one representative instead of two upon the council, who should be sent forward by the committee to the council as its representative.

2470. The operations of the Society are carried on, I believe, by means of their committees?—Yes.

2471. Each committee taking a separate department?—Yes.

2472. The control and superintendence of each department is left, generally speaking, in the hands of the committee?—Yes.

2473. If there is any occasion for reference in any particular matter that may occur in that department, is it to the Society at large, or to the Council?—First, always, to the Council, who, if they see fit, send the matter on to the Society, they themselves being powerless to decide; all they can do is to recommend. The committee recommend to the Council, and the Council recommend to the body at large, and the body at large decides.

2474. With regard to the library, attention has been called to an instance in which a book or paper had been allowed to be taken away from the library; was that subject made a matter of inquiry?—Yes.

2475. Was it brought by the library committee under the notice of the Council?—It was brought before the Society by an individual member, for the library committee had not been aware of it at the time. The case was this: a gentleman connected with one of the journals in Dublin, the "Medical Press," came to the librarian one Saturday after the library was closed, or just as it was about to close, and asked leave to borrow the Vaccination Act till Monday morning, and the librarian lent the document to this gentleman, who was writing an article for the "Dublin Medical Press," which was to appear in it the subsequent Wednesday; and it was returned, I understand,

derstand, about a quarter of an hour after 11 on Monday morning.

2476. The subject was inquired into by the Society?—Yes; and we had the librarian's explanation of it, which is in substance what I have stated.

2477. And that was considered satisfactory?—It was considered satisfactory.

2478. Has it been considered very desirable that there should be a room in the Library Department allotted for students who may wish to consult books there?—There has been such a room allotted for about three or four years, which is one of those rooms which formerly was occupied by the museum. As soon as it was in a fit condition to be used for the purpose, the Society had it supplied with gas, chairs, tables, and furniture; it was then thrown open and set apart for the readers. It is lighted at night, and a very considerable number attend to read in that room, both during the day and in the night-time.

2479. Have any complaints been made as to the insufficient space, or the insufficient furniture, for the accommodation of the readers?—In the day-time it is rather over-crowded; the Committee, therefore, have it in contemplation to fit up as a reading-room the main room of the library. The present room is not sufficiently large: the readers do not read in the large library at present, but in the adjoining room, which was one of the old museum rooms, and it is now hardly sufficient for the number of readers. In fact, at times it is over-crowded. I am quite aware that certain of the members of the Library Committee intend to bring forward the proposition to devote the library itself to the purposes of a reading room.

2480. Has any difficulty arisen in the carrying out of that intention from the want of funds?—Yes; the want of funds is the sole cause why it has not been done.

2481. If the Society were empowered to place a large sum at the disposal of the Library Committee, have you any reason to doubt that greatly increased accommodation would be given to the public in that respect?—Not the least.

2482. Is it the wish of the Society to do it?—It is the wish of the Society to do it.

2483. The appropriation of the funds voted by Parliament is not in the control of the Society; it is done by parties over here, is it not?—The Council send in an estimate each year, and it is on that estimate that the money is voted. They have a certain power, as it were, of allocating in their estimate how they wish the money in the subsequent year to be distributed, and changes have been made from time to time, which the Department of Science and Art and the Treasury have concurred in, and the money has been voted accordingly.

2484. When you have the money voted to you in that shape you are bound by that allocation?—Yes.

2485. Any deficiency that may exist in the furniture, and so on, for the students that may resort to those rooms, the Society are not to be blamed for?—No.

2486. Is the furniture of the existing library such as becomes an institution like the Royal Dublin Society?—Certainly not. It is in a most disgraceful state.

2487. You want a general refitting very badly?—Yes.

2488. I have heard observations made that the state of the carpet is quite disgraceful for an institution of that kind?—Yes. The fact is, I know the library committee are anxious that a carpet should not be again put down in the library. They desire to have the floor covered with the same material as they have in the British Museum, kamptulicon, which is much better in every respect, and they cannot do it, as there are no funds available for the purpose.

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2489. What is the whole amount allocated for the library department?—£. 930. 4*s.* 8*d.*

2490. Out of that money you are expected to pay the salary of the librarian, the clerk's salary, two porters, and for the purchase of books, binding, and contingencies?—Yes. I might mention, with reference to this grant, that nearly 250*l.* of the 549*l.*, which is the sum appropriated for books, binding, and contingencies, is absorbed in the binding of books, a large proportion being for the specifications of patents. But it contrasts very remarkably with the amount given for the same objects in the British Museum, which gets the great mass of the books free. It receives 10,000*l.* annually for the purchase of books, besides getting all the publications in the British dominions free, and 8,000*l.* for binding, so that the grant for the purchase of books and binding, in addition to those free grants, is 18,000*l.* a year. I do not mean to say that it is not quite right that this great national library should be so liberally supported.

2491. The salaries of all the officers of that institution would also be very considerable?—Yes; I have not gone into that question.

2492. I believe it has been practically found that several books required for the use of the professors of the departments could not be purchased for want of funds?—Frequently. An application was recently made by Dr. Harvey for a very expensive botanical book. The Committee were really at the time in debt; they had over-expended the amount of their allocation, and the consequence was, they had to refuse it.

2493. With regard to the purchase of books as, I understand, the library is principally a scientific one?—Chiefly scientific and literary. There are no books of fiction introduced, and no books which may be called professional books, such as medicine or law, or divinity. We have, however, books on engineering.

2494. The books purchased for the library are those principally relating to the advancement of science?—Yes.

2495. And the Arts?—Yes.

2496. Has it been found that the possession of those books by the Royal Dublin Society has been of the greatest possible advantage to students and persons who have availed themselves of the privilege of access to them?—No doubt of it; the number that borrow the books is very considerable, and they all must obtain advantage from their perusal.

2497. There is a rule of the Society that books may be lent to members for a certain period; does that include those scientific works?—Yes.

2498. Can those scientific works be studied so advantageously in the premises of the Society as at the private residences of the parties who wish to study them?—I think not; I myself, when investigating some scientific subjects, have found it a very valuable privilege to have the opportunity of taking two or three of those books home, because, from my occupations in the day-time, I could not otherwise have used them.

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2499. You are able thereby, in after hours, to pursue a study which, during the day-time, other avocations prevented you from pursuing?—Yes; and I know it is also the case with regard to other persons who are engaged during the day-time.

2500. During the time you have held the office you at present hold, has any case come under your notice, besides the one you have referred to, of any complaint of persons not being able to obtain books when they have asked for them, on account of their having been lent out of the library?—No; I do not think that I have heard of any officially at all. Persons may, perhaps, have been disappointed when they have been told that a book is out and they cannot have it, but that must be the case with all libraries. If a book be in use, another reader coming in cannot get it.

2501. There cannot have been any such complaint made, or it must have been within your knowledge?—It might not; but I have not heard a complaint made in any tangible form; perhaps you will allow me, with regard to the question of lending out books, to read extracts from the Report of the Select Committee on Public Libraries, made in the year 1850. At page 4 of that Report, I find this passage: "The principal advantages offered by foreign libraries consist in their number, in their entire accessibility, and in the fact that the books they contain are allowed on liberal yet sufficiently protective conditions to circulate beyond the walls of the library." At page 9, is this passage: "It is evident that there should be, in all countries, libraries of two sorts —libraries of deposit and research, and libraries devoted to general reading and circulation of books." Again, at page 12, "Your Committee have recognised in the establishment of libraries the general principles that they should (amongst other things), as far as possible, be lending libraries; the last consideration is one of great importance. Many men, in order to derive the fullest advantage from books, must have them not only in their hands, but in their homes. A great public library ought, above all things, to teach the teachers; to supply with the best implements of education those who educate the people, whether in the pulpit, the school, or the press. The lending out of books, therefore, which is a general characteristic of foreign libraries, should be an essential element in the formation of our own."

2502. That is, practically, the action of the Royal Dublin Society in regard to their books?—It is.

2503. It has been stated to us that admission to the library, on the part of any respectable person, may be considered almost as a matter of course; is that so?—Yes; and I may mention that the Library Committee, at the commencement of last Session, were anxious to extend it still further. To make the admission still easier, they wished to pass a rule that anyone wanting to obtain admission as a reader into the library might apply to the library committee, who after a little inquiry, and having ascertained his respectability, might admit him; they were only prevented from carrying that into effect by a statement of one of the members of the committee, who, I know, is himself anxious for the rule to be carried out, saying, that some inconvenience had been felt in the British Museum from a similar rule, that it had been altered, and that, therefore, it would be well for them to suspend making that rule. Since I have come to London, I have made myself acquainted with the rules of the British Museum, and I find that the gentleman I allude to was under a mistake; therefore, probably before long, the library committee will make such a rule, thus rendering the library still more accessible, so that anyone applying, and on the committee being satisfied of his fitness as a reader, should obtain admission.

2504. Mr. *George.*] The librarian has never refused access to any book, to any scientific person asking for the privilege temporarily?—No. Many persons come to me, also, as being on the spot, and ask for leave to go into the library and consult books; and I have invariably given an introduction, seeing that they are respectable persons, to read in the library for three months at a time.

2505. Sir *Edward Grogan.*] Have literary gentlemen, pursuing literary studies, ever expressed to you the importance of the principle of allowing the books of the Royal Dublin Society to be lent out?—Yes; I have heard it from several persons who are engaged in literary pursuits; among others, Dr. Waller, a gentleman engaged in literature, Dr. Anster, and Dr. Ingram, a Fellow of Trinity College, who has access to his own library, but cannot obtain books out of it. Dr. Anster and Dr. Ingram borrow books largely from the library, for the purposes of authorship.

2506. They attach, therefore, the greatest importance to that privilege?—Yes; I should fancy that they would find great difficulties in carrying on their literary labours without something of that kind.

2507. Is not that almost the only remaining privilege belonging to a member of the Society?—The only substantial remaining privilege; the other privileges (so called), such as entrance to the cattle shows, and so on, are matters which the Dublin public do not set any very great value upon.

2508. Has any substantial loss been sustained from this practice of lending books?—No; some few books have gone astray, but they have been, with the exception of a very few, replaced by the members losing them.

2509. Practically, therefore, the advantages of the lending principle are fully developed in the Royal Dublin Society; no loss has been sustained, and the privilege is very highly valued?—Certainly. I might add that even if the loss amounted to a considerable extent in the year, the advantages would more than compensate for such loss.

2510. Did you hear the evidence of a witness upon the same subject, as connected with the Cambridge library?—Yes.

2511. And you concurred in the views he stated?—Yes. I find that the Advocate's library in Edinburgh is also a lending library. That library, like the British Museum, gets a copy of all books published. They have a grant also, I believe, from the Advocate's Fund.

2512. In your opinion, the privilege of circulation of the books among the members of the Royal Dublin Society greatly enhances the value of the library, causing a more extensive use of the books than would otherwise be the case?—Certainly. The families of the members peruse those books, and the use of the books is thus greatly extended.

2513. Was a valuable library presented to the Society some time ago?—Yes; by Dr. Joly.

2514. Has

2514. Has the Society yet been able to properly accommodate it, so as to open it for the use of the public?—Not properly; the books are piled up in the rooms unclassified, for want of proper means to have them arranged.

2515. I need hardly ask you whether such a mode of treatment of a valuable donation of that kind is likely to lead to subsequent donations?—It is most discouraging to donors.

2516. Has Dr. Joly expressed any feeling of that kind?—No. And he is resting on his oars till assistance may be obtained.

2517. Mr. *George.*] He is preparing his own gift for arrangement on shelves, is he not?—Yes. Another small room for the deposit of books of great value, while he is arranging his library, has been applied for; and we are not able to give him one, in consequence of our not having the means for fitting it up.

2518. Sir *Edward Grogan.*] He is anxious to have books of special value placed in a special place for security?—Yes.

2519. You have not been able to accommodate him in that respect?—No. This library consists, not, as has been insinuated by a witness, of works of theology, or of a sectarian character, or history of one complexion only. Half of the 10,000 volumes, as I understand from Dr. Joly himself, consists of modern histories, including every publication, even to the leaf of a ballad, published in all languages, as regards the First Napoleon and his career. The remainder of the library consists of books of a miscellaneous character. There are about 1,000 volumes of Irish history, and an immense collection of serials, so that the other half of the library may be said to be made up of a miscellaneous collection.

2520. It is a most valuable addition, therefore, to the historical branch of the Library of the Royal Dublin Society?—Most valuable; in fact, it is a unique library.

2521. It could not be purchased by money?—So I understand.

2522. Mr. *George.*] Are there not also some engravings in the collection?—Dr. Joly has also given 10,000 engravings; and those engravings are mostly all proofs. I myself saw proofs of Hogarth's works corrected, in his own handwriting, while they were going through the hands of the engravers.

2523. *Chairman.*] Are those prints illustrative of the art of engraving?—Yes, partly so.

2524. Sir *Edward Grogan.*] Is the library open every day of the week, during the daytime?—The library is open every day of the week, from 11 to 5; and three times a week in the evening, from half-past seven to half-past nine.

2525. It is open to the public (on the nomination of members) at those times, there being no time reserved for the special use of the members, notwithstanding that it was recommended by the Department of Science and Art that certain times should be reserved for the use of members?—Yes.

2526. Sir *Robert Peel.*] What is the average attendance?—In the evening about 12; in the daytime about 60.

2527. Everybody who comes gains admission if he appears to be a respectable person?—No; the rule is that he must have an introduction from some member.

2528. I understood you to say that on any respectable person applying to you, you give him an introduction to the library?—Yes. But I do not suppose that more than 10 or 12 in a year come to me for that purpose; they have opportunities of obtaining admission in other ways.

2529. Sir *Edward Grogan.*] A person is admitted on the recommendation of a member?—Yes.

2530. So that the member is held responsible for the conduct of the applicant?—Yes.

2531. Those who have failed in obtaining the recommendation of a member have in some cases applied to you?—Yes.

2532. You stated that it was under the consideration of the Library Committee to extend that rule?—Yes.

2533-4. If the relaxation of that rule should take place, as proposed, practically the Library of the Royal Dublin Society would be in Dublin very much like what the British Museum is in this country?—Yes, except as regards the extent of the library.

2535. That being so, I apprehend you do not see any very strong reason why the Royal Dublin Society's Library should not receive something like the same sort of liberal treatment that the library which exists in this country receives?—No.

2536. Sir *Robert Peel.*] I understood you to say that the Advocates' Library in Edinburgh has the right to receive a copy of every book published?—Yes.

2537. Has that privilege been extended to any library in Ireland?—Trinity College has a similar privilege.

2538. Sir *Edward Grogan.*] That privilege was never conceded to the Royal Dublin Society?—No.

2539. Yet the library of that Society practically performs the same functions in Ireland that the British Museum Library does in this country?—Yes, to a limited extent.

2540. As far as its means go, the libraries in the two places not being identical in point of extent?—Yes.

2541. Mr. *George.*] Is there not a very large number of valuable books kept in a portion of the premises very unfit for books of that kind to be kept in?—Yes; some of the most valuable books are entirely out of reach, being placed in the attic rooms, and others in the eaves of the roof.

2542. Up in the timbers?—Yes.

2543. Is that a place where valuable books ought to be kept, with reference either to their use or their preservation?—Every part of the house is so exceedingly dry that the books are in as good a condition in the roof as they would be anywhere else.

2544. It is a storeroom, but not a library?—Yes.

2545. Is the Society unable, for want of funds, to fit up the rooms formerly occupied by the museum as additional library rooms, to which any valuable books from the roof, and from those galleries in which some books are now placed, could be transferred?—Certainly.

2546. The same observation applies to the Joly Library; you have not funds to properly shelve that library?—Yes.

2547. You are under terms from Dr. Joly to give proper room accommodation (of course with respectable shelving) for that valuable library?—Yes.

2548. Did he reserve the power of resuming that gift if the Society were not in a position to decently accommodate it?—There is a condition somewhat

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somewhat to that effect in the deed of gift, an abstract of which I have.

2549. He can resume possession of it?—Yes.

2550. Sir *Robert Peel.*] After what period?—No period is named; but if the Society should be unable to maintain its library, it shall go (if he be not alive) to any public library that may be established in Dublin; failing that, to his next of kin.

2551. Sir *Edward Grogan.*] Though the upper attics may be very suitable as storerooms, the books are not accessible to the readers generally, are they?—No; they are not at all accessible unless a porter were to go up and search for them. There are many evils which arise out of the present state of things as regards the books; for instance, there is the impossibility of cataloguing them properly. We cannot have an indexed catalogue to show the position of the books, as they are at present only placed temporarily. Before long we hope that we shall have those additional rooms shelved, and then the books can be classified and properly catalogued.

2552. As to the purchase of books, is due care exercised by the Library Committee in purchasing, and is the Committee so constructed as to ensure a proper selection of books?—I have been present at some hundred meetings of the Library Committee, and I can say I never saw greater care exercised by any body of men to make a proper selection of valuable books. We have, fortunately, on the Committee gentlemen who represent a large number of the sciences. We have Rev. Dr. Dickson, Fellow of Trinity College; Dr. Wright, Professor of Zoology in the University; Dr. Ingram, Professor of History; Dr. Anster, Professor of Law, who is well acquainted with foreign literature; Dr. Barker, the Curator of the Museum of the Royal College of Surgeons, an excellent naturalist and mathematician; Dr. Sidney, who has a very intimate acquaintance with mathematics and physics of the higher order, and other gentlemen who are equally acquainted with other branches of science or literature; and by their combined action the scientific and literary part of the library is kept up as good as it can be, with the limited means at the disposal of the Committee.

2553. That is the principal object of the Committee, the purchase of books of that kind?—Yes; and the general regulation of the affairs of the library.

2554. Sir *Robert Peel.*] Is it the practice that a member who wishes that a particular book should be purchased, sends in the title of it to the Library Committee?—There is a recommendation-book lying in the library, in which any member can write the name of a book which he wishes should be added to the library.

2555. That is submitted to the Committee?—Yes; and, besides that, the booksellers, Messrs. Hodges and Smith, of Grafton-street, send all the new books to the Library Committee every month for inspection; and from their knowledge of the authors of the works, they purchase at once such of those books which they think ought to be added to the library.

2556. Sir *Edward Grogan.*] By that means the Committee are kept *au courant* of all the new works on scientific and literary subjects?—Yes; and moreover, if the professors require any book for their special objects, the Librarian can at once order it without reference to the Committee.

2557. Sir *Robert Peel.*] What is the amount per annum that you expend in the purchase of books?—About 250*l.*

2558. You have 900*l.* appropriated for the library, and you spend 250*l.* in the purchase of books?—Yes.

2559. With respect to this valuable gift of Dr. Joly, has any special call been made upon the members of the Society to obviate the contingency that might arise of Dr. Joly finally resuming the library?—No, there has been none; because the necessity, in fact, has not arisen. We have considerable hope that the recommendation of this Committee will meet the state of things.

2560. Is it true that only 60*l.* is contributed by the members of the Society towards the library?—It is only occasionally that we supplement, as it were, the governmental departments, for the money which we receive from members' subscriptions is barely sufficient to keep the other things in order; for instance, if there be a loss upon one of the cattle-shows, which is quite possible, the subscriptions of the members must make good that deficiency. If there be a loss on any of the exhibitions, a deficiency in the funds of the School of Art (which, on an average, amounts to 110*l.* a-year), the cost of printing the Society's journal, a portion of the cost of general maintenance, &c., must all be defrayed out of the members' subscription fund.

2561. You do not get more than 60*l.* a-year from all the members of the Society towards the library?—No.

2562. Sir *Edward Grogan.*] Out of the annual subscriptions of the members, a certain sum is allocated by way of supplement to the different public departments?—Occasionally.

2563. The amount so supplemented to the grant for the library appears to have been, in 1861, 63*l.*?—It happened to be that amount in that year.

2564. Sir *Robert Peel.*] Is it generally that amount?—It is sometimes more and sometimes less.

2565. Mr. *Waldron.*] Is it the fact that the Council allocate the different sums to the different departments?—Yes, of the Parliamentary Grant; but there is no distinct allocation of the private funds.

2566. Mr. *George.*] Out of any general funds that happen to be contributed for the general purposes of the Society by the members, you occasionally give a small contribution toward the library?—Occasionally.

2567. There is no regular subscription from the members of the Society for the library?—No.

2568. Sir *Robert Peel.*] You run the risk of losing this valuable Joly Library, estimated at about 10,000*l.*, because the Society has no means of properly accommodating that library; and yet you have made no call whatever upon the members of the Society to obviate such a serious risk as that?—It is a thing that has not been thought of, because we made an application about a year ago to the Treasury, for a sum of 405*l.* to shelve the rooms and have them made ready for the Joly Library; and that application is, in fact, in suspense.

2569. *Chairman.*] You made your application for that sum of money before you received this gift of the Joly Library, did you not?—No; after we had received his gift we made that application. The 405*l.* is in addition to the 1,000*l.*, which was put down before the Joly Library came

came in; on our acquiring that gift, 405 *l.* in addition was applied for to the Treasury.

2570. Mr. *George.*] Is not it the fact that you want largely-increased accommodation for the books at present in the galleries and in the roof of the house, independently of the Joly Library altogether?—Certainly.

2571. Sir *Robert Peel.*] Has Dr. Joly made any proposal to transfer his gift to any other institution?—None whatever. I believe that he has felt perfectly at ease in his own mind that the Society will have ultimately ample means allotted to them for properly accommodating his library.

2572. He is alive still, is he not?—Yes.

2573. What aged man is he?—About 50.

2574. In his deed of gift, as I understand you, he stipulates that if the Society do not find means during his lifetime to adequately accommodate the library, his family may claim it?—With regard to that, there are two rooms in which the Joly Library at present is placed, and which are shelved, but in a very imperfect manner; and he himself is undertaking the arrangement of the books. He is, in fact, arranging them at present, but not with that rapidity which is desirable.

2575. Mr. *George.*] The shelving is very inferior shelving, is it not?—Yes.

2576. Sir *Robert Peel.*] Have you made any statement of that kind to the Treasury, that you run a risk of losing that gift unless you provide proper accommodation for it?—The Treasury are acquainted, I believe, with all the circumstances.

2577. How long ago did you make that application?—Early last session.

2578. What reply did you get?—The Treasury said, that until the Department of Science and Art had recommended it, they could take no action in the matter. The Department have, I believe, made no recommendation upon the matter.

2579. Mr. *Waldron.*] Was not all this suspended pending the question of the amalgamation?—Yes; that, in fact, has suspended action on all applications.

2580. Mr. *Lefroy.*] Is not it true that two rooms, formerly occupied by the Museum, have been cleared out, and that that valuable Joly Library has been put into those apartments, so that the library is secure at present?—Yes.

2581. And that the books constituting that library are not amongst those that have been alluded to as being stored in the upper part of the building?—Yes, they are not in the upper part of the building.

2582. Mr. *George.*] Is it not the fact that the books belonging to the Joly Library are, at the present moment, in two small rooms, tied up in bundles and laid upon their sides, on shelves; but not arranged as any public or private library ought to be?—They are not arranged; they are lying on the shelves as you state.

2583. Do you consider the shelving in those two rooms suitable for any public or private library?—Certainly not; I do not consider the shelving in any part of the library to be suitable shelving.

2584. Confining yourself to the Joly Library, that library is at present in two small rooms, which were formerly museum rooms, the shelving of which is entirely unfit for a public library?—Yes.

2585. Is it the opinion of Dr. Joly himself, that that shelving is not adequate for the valuable library which he has given to the Society?—I cannot state; I have not asked him the question.

2586. The books at present are not placed on shelves in the ordinary manner, but are placed flat on their sides, one on top of the other?—Some are.

2587. Sir *Robert Peel.*] They cannot be catalogued?—No.

2588. And, therefore, they are not available to the general public?—No.

2589. Mr. *George.*] The society has given an estimate that it would require 405 *l.* to properly shelve and arrange those rooms for the Joly Library?—With regard to that, a little explanation is required. When we got the gift of the Joly Library, we intended to place it in the large room, which is used as the reading-room, and the estimate is framed with that view.

2590. The intention of the Society was to remove the Joly Library from those two small and inconvenient rooms, to that handsome room next adjoining the principal library?—I cannot say exactly that that is their present intention; these rooms, at the end, are perhaps the most secure for this library.

2591. *Chairman.*] Does the Royal Dublin Society run any risk of losing this gift of Dr. Joly, by reason of the present inadequate accommodation?—No; I believe not.

2592. Mr. *George.*] You have stated already to the Committee that he has reserved the right of resuming that gift, if proper and suitable accommodation was not provided for it; is that the case, or not?—Those are not exactly the words in the deed of gift; but that his family may resume it if the Society should be unable to keep up its library.

2593. *Chairman.*] At all events, there is no fear of Dr. Joly resuming his gift?—No; certainly not.

2594. Sir *Robert Peel.*] Are there any special stipulations made by Dr. Joly, as regards the use of the books by the public generally?—The books are not to be lent out, and they are not to be used in the evening at all.

2595. You said, just now, that the library of the Royal Dublin Society is analagous to that of the British Museum, and yet it appears that a great number of the books belonging to the library of the Royal Dublin Society, owing to the stipulation in the deed of gift of Dr. Joly, cannot be lent out to the public, or read in the evening?—That restriction only applies to the books in the Joly Library, and they can be read in the daytime. It only applies to 10,000 out of 45,000 volumes. Dr. Joly conceives that the library could not be possibly replaced at any cost, and therefore should be placed in a position to be free from any kind of risk.

2596. Can you mention what the special stipulations in his deed of gift, as regards that restriction, are?—This is an abstract of his deed, prepared by the Society's solicitor:—"The books shall be examined and accounted for by the librarian of the said Society, or his assistant, or other officers appointed by the said Society for that purpose, on the 26th of May in every year, or within 20 days after."

2597. That stipulation has not yet been complied with?—Not as yet, because they are not arranged.

2598. Sir *Edward Grogan.*] Have they yet been put into the possession of the Society?—No, they are in the custody of Dr. Joly at present. "Authority for the heir of the late Venerable

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Henry Edward Joly and the Incumbents of the parishes of Castlejordan, in the diocese of Meath, Carberry, or Clonsast, in the diocese of Kildare, to take part in such examination and account, if they shall think fit. Authority to Dr Jasper Robert Joly, or his wife, in certain events, or such person as he shall appoint by his will, at all times to remove all or any of the said books, &c., from the custody of the said Society, for the purpose of examining, reading, or consulting, or of having same bound or re-bound (the costs of such binding or re-binding to be defrayed by them) upon their undertaking, in writing, to have the same restored to the said Society, except in case of loss or destruction. Authority to any one or more of the lineal descendants of Dr. Jasper Robert Joly, of the age of 11 years and upwards, to borrow from the said collection any book or books not exceeding at one time two distinct works, provided such receipt as is provided by schedule shall be given by them, and which receipt, if given on the part of a minor, shall be signed by his or their guardian: books so borrowed to be returned on or before the 26th day of May next ensuing the date of such receipt. If not returned in good order and condition within such period, double the value of same, according to amount specified in catalogue, to be paid by borrower. During default, in returning such book, or in paying such amount, the privilege of borrowing to be suspended. Amount so to be paid shall be applied in making good the loss or injury, and the residue (if any) to the improvement of the collection. Such privilege of borrowing shall not extend to any sheet or print in said collection. No lineal descendant of Dr. Jasper Robert Joly shall be entitled to such privilege until he or she shall have handed to the librarian of the Society a certificate of such descent, signed by Dr. Jasper Robert Joly, or his heir, for the time being, ascertained as thereinafter set forth; or if such heir be a minor, or such certificate cannot otherwise be conveniently obtained from such heir, then the same shall be signed by the Incumbents for the time being of the aforesaid parishes, or any two of them. Provisions here follow to the ultimate destination of the said collection upon the contingent occurrences of the events therein mentioned. Provision, that the said Society shall not be bound to make good the said collection, or any part thereof, in case of accidental fire. Provision, that the heir of the late Venerable Henry Edward Joly shall be ascertained from among his descendants, according to the like rules as those which are at date of deed by law applicable to the descent of the Crown of England among the descendants of his late majesty King Geo. I."

2599. This library is given to the Society in its corporate capacity, of course?—Certainly.

2600. We have it in evidence that the Society have, in the most distinct terms, declared that they are trustees for the public?—Yes.

2601. Consequently, this gentleman has made a gift to the public, constituting the Royal Dublin Society the trustees of that gift?—Yes; and it is so stated by Dr. Joly himself, for the use and benefit of the members and the public.

2602. Do the Society consider the conditions which he has introduced into his deed of gift unfair and unreasonable?—No; I think not.

2603. Would they be glad to receive grants of an equally valuable character on the same conditions?—Yes.

2604. Do you think, therefore, that, as it is a grant to a public library in a certain sense, it is not unreasonable to apply to the Government to furnish assistance, to enable them to give suitable accommodation to it?—That is the ground of the application.

2605. Is that the ground, also, on which the Society think that it is not unfair to ask the Government to provide money to meet the arrangements connected with the library generally?—Yes.

2606. *Chairman.*] Do you think that there ought to be a grant of public money given in a case like this, whether special privileges are reserved for the descendants of a grantor; do you know of any similar instance?—No; I know of no similar instance.

2607. Mr. *Waldron.*] The only privilege that is reserved to the relatives is the privilege of borrowing some of the books out?—Yes.

2608. But that privilege is not to extend to some of the things given, is it?—No; anything in sheets is not to be lent out.

2609. Sir *Robert Peel.*] One stipulation in the deed of gift is, that the books are not to be used after five o'clock in the afternoon?—Yes.

2610. So that for the hours during which the library is open in the evening, the public are debarred from the use of the Joly Library?—Yes. Dr. Joly is very much against opening of his library in the evening. He does not choose to run the risk of having his books used at a time when there is greater danger of fire than in the day time.

2611. Sir *Edward Grogan.*] Have you ever received any donations of books from any other person than Dr. Joly?—We are constantly receiving large donations of books, which amount to a considerable number in the year. We receive from 100 to 200 volumes and pamphlets every year.

2612. The library is only recruited by such donations as the Joly Library, or by gifts from societies and private persons, supplemented by the small amount which you have for the purchase of books?—Yes; those are the sole means by which the library is kept up.

2613. Mr. *George.*] Sir Robert Peel asked you what proportion of the 900 *l.* and odd, that was allocated for the use of the library, was laid out in the actual purchase of books, and you said it was 260 *l.*, I think?—I have a memorandum here which I had better read. "Amount expended on binding in the last eight years, or since the 'patents' have been received, total, 1,206 *l.* 3 *s.* 4 *d.*, viz., on ordinary books 391 *l.* 1 *s.* 4 *d.*, on patents, 815 *l.* 2 *s.* In the year just ended (31 March 1864) the ordinary binding was only 38 *l.* 16 *s.* 7 *d.*, while that for the patents came to 157 *l.* 11 *s.* 9 *d.*

2614. Those patents, I believe, are sent by the Patent Office to the Royal Dublin Society?—Yes.

2615. Is that gift accompanied with the condition that the Society must bind them?—Yes. The condition originally was, that the Society should bind them, and that they should be open freely to the public; so that anyone calling at the Society's home could obtain them.

2616. Does that lead to a very undue proportionate expenditure out of the library grant upon the binding of those patents?—Undoubtedly.

2617. Do you consider, speaking for the Society, that it is necessary that that condition should be continued for the preservation of the patents?

patents?—Yes; but not to the extent that is here set down. In the course of last year the Library Committee, seeing what an immense expense these patents were entailing, made a very important alteration in the mode of binding. Formerly the plates, many of which are very large, were mounted separately on linen; this caused a great expense, and now they are bound without being so treated.

2618. Is the Patent Office satisfied that you should reduce the expenditure of the Library Committee by binding the specifications in that less permanent manner?—I do not think they have been asked the question.

2619. There has been no objection raised to it?—In fact, they do not know it.

2620. Sir *Robert Peel.*] Still you admit that it is of the greatest possible utility to have those specifications of patents deposited in the library?—I think that the library ought to have them, though they are seldom consulted. It is necessary that inventors should have ready access to them, to ascertain what has been already invented.

2621. Mr. *George.*] Have you ever asked the Patent Office to give them to you already bound?—No; I do not believe they send out any bound.

2622. Mr. *Lefroy.*] Are we to understand that, independently of the rooms devoted to the Joly Library, you have ample room-accommodation for making the large collection of books which have been described as stored up accessible to the public, and perfectly safe?—Yes.

2623. Provided you had means for fitting up the rooms properly?—Certainly. I may add, from my acquaintance with many libraries, that I think when once that library is arranged, there being so many rooms, it would be one of the most convenient and most useful libraries I know of.

2624. Mr. *George.*] The whole of the rooms formerly occupied by the museum are capable of being appropriated to the library?—Yes.

2625. Sir *Edward Grogan.*] There are several other libraries in Dublin; none of them, I believe, are of the same character as that of the Royal Dublin Society?—No. There is Marsh's or Stillingfleet's Library, which contains chiefly old books on divinity and history; I do not believe that there are any scientific works in it.

2626. The Queen's Inns' Library is principally a legal library, is it not?—I think it is a general library.

2627. Is the admission to it confined to a particular class?—It is principally for members of the legal profession; I do not know whether admission is given to others.

2628. The Library of Trinity College is exclusively confined to its own members?—Unless persons may obtain special permission to read in it from the Board.

2629. Sir *Robert Peel.*] Are you not aware that the facility of access to Trinity College Library is about the same as to the Royal Dublin Society's Library?—I am not aware that it is; if respectable persons applied for admission, no doubt the Board would not refuse them.

2630. *Chairman.*] Practically, are you acquainted with the regulations relating to admission to Trinity College Library?—No.

2631. Sir *Edward Grogan.*] There is another library called the Dublin Library; that is confined to its own members entirely, is it not?—None but subscribers can use it.

2632. Sir *Robert Peel.*] You have heard, no doubt, of the proposed scheme of amalgamation of the Royal Dublin Society and the Museum of Irish Industry; do you think the Royal Dublin Society would be ready to take upon themselves the grave responsibility towards the public of having an institution of the importance of the Museum of Irish Industry attached to them?—The question of amalgamation was never before the Society in its corporate capacity at all.

2633. Has not it been discussed often before the Council of the Royal Dublin Society?—No; never officially.

2634. But it has been brought under the notice of the Council of the Royal Dublin Society and freely discussed there, as I understand?—Never as a distinct question; individual members have expressed their opinions, but there has been really no expression on the subject by the Council. The Society has never expressed any sort of anxiety that the amalgamation should take place; they have been simply passive in the matter.

2635. Are you aware what the feelings of the individual members are in the matter?—Yes; from what I could ascertain, the members were in favour of taking upon themselves the responsibility of discharging the functions of the Museum of Irish Industry.

2636. They felt that the Society would be quite competent to discharge those functions?—Yes.

2637. Do you think that the feelings of those gentlemen would be shared by the people of Dublin or Ireland, generally?—I cannot say.

2638. Do you think it would be a popular step to take to merge an institution of the acknowledged utility and importance of the Museum of Irish Industry into the Royal Dublin Society?—I cannot say what would be acceptable to the people of Ireland at large; but I have heard many persons speak in favour of the amalgamation who are not members of the Society.

2639. Mr. *George.*] Do you consider that you could carry out the useful purposes of both institutions, if such an amalgamation were to take place?—I do not see any difficulty in so doing.

2640. Mr. *Waldron.*] The form in which the proposition came before the Council was this, was it not: the Government wished to know whether, if they decided that amalgamation should take place, the Council of the Royal Dublin Society would accept the responsibility of discharging the functions of the Museum of Irish Industry, in addition to those belonging properly to the Royal Dublin Society?—The question never came in a more distinct and definite shape before the Council further than this: there was a letter from Mr. Frederick Peel, stating that the Report must be taken as a whole, and that, as soon as the Society should accept it, the Government would carry out the recommendation of the Commission; whereupon the Society accepted the Report, so far as it related to the Society itself. If the Government had chosen at that time to have given over the functions of the Museum of Irish Industry to the Society, of course they would have done their best to carry them out.

2641. Sir *Robert Peel.*] You think them quite able to carry out those functions?—Yes, I believe so, as laid down in the Commissioners' Report.

2642. Are you aware that an important deputation from all parts of Ireland waited upon the Prime Minister, to impress upon him the inadvisability of that amalgamation?—I am aware of something of that kind having taken place.

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2643. And that he authorised me to state in Parliament that he was opposed to that amalgamation?—I have seen a report on the subject in the newspapers.

2644. Still, you think it would be beneficial to Ireland that that amalgamation should take place?—As regards that, I can only say the Society could, I believe, carry out what has been recommended by the Commissioners in their Report. I have no hesitation in saying that, because those functions are very much the same as they discharged before the professors were taken from under their control.

2645. Has it occurred to them what they would do with the collections which are at present in Stephen's Green, seeing that they have no accommodation even for the Joly Library?—The museum building of the Royal Dublin Society consists of two very large rooms: the under one is nearly empty; the upper one, if provided with cases, would contain nearly all the collections we have at present, so that the underpart would be available for any additional matters that might be sent in.

2646. Mr. *George.*] What is the size of the large room below?—The large room below is 200 feet long, by 40 feet wide.

2647. Sir *Robert Peel.*] You say that the Society never expressed any anxiety for amalgamation?—They never expressed any anxiety for it; individuals may have, but the Society never gave any opinion on the subject. In the speech made by Mr. Maunsell, at the time those resolutions were passed accepting the Commissioners' Report, he distinctly stated that the Society were ready to accept the conditions of the report, but that they never had applied or expressed any anxiety on the matter.

2648. You have always lived on terms of the most friendly amity with the Museum of Irish Industry?—Yes.

2649. There has been no hostility and no jealousy?—Not the least.

2650. Are you aware that one of the most distinguished professors in Ireland has stated before this Committee that he, for one, would at once resign his functions if that amalgamation took place?—I did not hear that.

2651. You think that the amalgamation could take place with advantage to the public?—Yes.

2652. You believe, in fact, that the public duties of the two institutions are analogous?—They are somewhat analogous.

2653. Have you seen a letter from Mr. Adderley in the Appendix to the Report of the Commissioners?—Yes.

2654. Have you read it?—Yes.

2655. Are you aware that Mr. Adderley entirely disputes now the correctness of the views he has there expressed?—I am not at all aware of it.

2656. Do you think his statements in that letter are correct?—Not altogether.

2657. You agree with what Professor Jukes said the other day, that they are erroneous?—In some respects; for instance, we have not a double staff of professors.

2658. Do not you think it odd that a former Vice-President of the Department of Science and Art should have committed himself in that way?—I suppose so.

2659. You admit that the statements in that letter are, as Professor Jukes said the other day, entirely unfounded, or, at all events, erroneous in a great degree?—Mr. Adderley might have supposed there was a double staff.

2660. What he stated is not the fact?—Not in every respect; there is no double staff, and no double lectureships; there are, to a certain extent, double collections and double building and fitting grants.

2661. Sir *Edward Grogan.*] I will read to you a question and answer in the evidence of a former witness, and ask you if it expresses the meaning you intend to convey: "1067. Do you consider that a society which is composed of a fluctuating council, and with fluctuating committees, to regulate scientific education, is the proper method of giving that education?—I think it might be a very effective mode if the practical education in science were handed over to the Royal Dublin Society. I should say, in the first instance, that the Royal Dublin Society have never sought to have it handed over to them; that the idea of amalgamation, I believe, originated first in the House of Commons, with an English Member; that the Society never sought it, directly or indirectly: but if the Government should think fit to hand over the educational functions in Science which are now administered in the two institutions exclusively to the Royal Dublin Society, I feel quite sure that the Royal Dublin Society would be both able and ready to carry them out." Is that what you mean to convey to the Committee?—Yes.

2662. You concur in that statement?—Yes.

2663. *Chairman.*] The Royal Dublin Society is an Agricultural Society, is it not?—Partly.

2664. A Botanical Society?—Yes.

2665. It has been a Statistical Society?—They had a Statistical section many years ago.

2666. It embraces Natural History?—Yes.

2667. And Mineralogy?—Yes, as part of the Natural History Museum.

2668. It occupied itself in the Geological Survey at one time?—Yes.

2669. It is keeper of a public library, is it not?—Yes.

2670. I may call it a Fine Arts Society, inasmuch as it has Drawing, Sculpture, Architecture, and Painting under it?—Yes.

2671. I presume that you consider that it is pretty multifarious in its objects?—Yes.

2672. Do you think it would be very much to its advantage to have an additional scope given to it?—Not for its advantage, but for the advantage of the public.

2673. You think it would be able to manage its extended functions?—Yes.

2674. Is there any other private institution in the whole world supported by public funds which embraces so many departments of knowledge?—Not that I am aware of; there may be, but I am not aware of one.

2675. Mr. *George.*] Have you read the evidence of Sir Robert Kane given before the Commissioners in Dublin in 1862?—Yes.

2676. Is this part of the evidence given by Sir Robert Kane: "I was for a long time a professor in the Royal Dublin Society, and had an opportunity of witnessing how zealously the members worked to carry out its objects; and I fully believe that if the amalgamation took place to-morrow, the public would not lose by the change, and the country would not look upon it unfavourably. But whether that should take place or not is a question upon which I cannot express an opinion; that is a question of Government

ment polity. The Government founded that other institution with a specific object, and I was induced to take charge of it. It has not attained the popularity which might have been wished, because it had to struggle with disadvantages and hostility. Whether it is politic for the Government now to retrace its steps, and restore to the Royal Dublin Society the functions which had been handed over to the other institution, is a matter altogether for the Government itself to determine; but if these functions are handed over, I believe that the Royal Dublin Society will administer them ably and honestly, and that the position of the Society would tend to give an amount of popularity to any of its acts which the more youthful institution might be long to acquire"?—Yes.

2677. Do you agree with or dissent from the tenor of that evidence?—I am inclined to agree with it. I agree with it generally; but I cannot say whether the museum is popular or unpopular.

2678. Sir *Robert Peel.*] Do you entirely agree with that statement of Sir Robert Kane's?—To a certain extent I agree with it.

2679. Are you aware what he meant by "hostility" there?—No; I am not. I do not remember noticing that expression before.

2680. Mr. *George.*] Was there ever any hostility on the part of the Royal Dublin Society to Sir Robert Kane?—I think I will be able to set that at rest. In the year 1854, the Minute constituting the Museum of Irish Industry was sent over to the Society for their assent; and, after a deputation had waited in London on the Board of Trade (who at that time exercised the functions of the Department of Science and Art), a certain modification was effected which originated the committee of lectures. That committee, which was a body composed half of members of the Royal Dublin Society, and half of nominees of the Government, were to regulate the lectures common to both institutions; and, on such modification being assented to on the part of the Government, the Society passed the following resolution, unanimously:—"That the Society agrees to adopt the propositions of the Lords of the Committee of Privy Council for Trade, as explained in the report of the deputation, and in Mr. Hamilton's letter, this day read; and that it be referred to the council to make such arrangements for giving effect to the same as may be mutually agreed upon by them, in conjunction with the Board of Trade." The Society regarded that arrangement as final, and manifested its readiness to carry it into effect, fully and cordially. On the 9th November 1854, that is, shortly after this scheme came into operation, the educational arrangements were inaugurated by Sir Robert Kane in an address which, at the request of the council, he delivered in the Society's theatre, and on that occasion they invited, by special invitations, a large number of leading persons in Dublin to be present, for the purpose of hearing Sir Robert Kane deliver the inaugural address. Since then, numerous specimens from the Botanical Gardens and the Museum, and apparatus, have been sent during each course of lectures to the Museum of Irish Industry. About five or six years ago, a very large collection of manufactured articles was transferred from the Society's collection to the collection in Stephen's Green, as the Society considered it a more suitable place for them, and also a large collection of vegetable products from the Botanical Museum were also sent to the museum in Stephen's Green. On the recommendation of the library committee, the Society gave the same facilities, as regards the borrowing of books, to the professors in the Museum of Irish Industry, as were enjoyed by the members or professors of the Royal Dublin Society itself. There happen to be only two that were not members of the Society, but they have the same privileges, as regards our library, that our own members have. I may also add that I have myself heard Sir Robert Kane, in several of his annual addresses, speak in eulogistic terms of the Society, and their cordial co-operation in carrying out the system of education through the instrumentality of both institutions; so that I think there is very little ground for supposing that the Royal Dublin Society has ever manifested any hostility or jealousy towards the Museum of Irish Industry.

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2681. Mr. *George.*] You do not think when Sir Robert Kane used this expression, "it has not attained the popularity which might have been wished, because it had to struggle with disadvantages and hostility," he had reference to any hostility shown to him by the Royal Dublin Society or its members?—I am sure he had not.

2682. Sir *Robert Peel.*] Did I understand you correctly to say that you believed the general feeling to be that the amalgamation would be advantageous to the public?—I did not say the general feeling, I said that I had heard it expressed by several people who are not members of the Society.

2683. You are aware of what led to the establishment of the Museum of Irish Industry?—I have learnt it for the first time in this room.

2684. You are aware that the late Sir Robert Peel took an active and earnest interest in what concerned the welfare of Ireland?—Yes.

2685. Are you not aware that when it occurred to him and the Government of that day to establish the Museum of Irish Industry, it was suggested to him that probably the Royal Dublin Society might be serviceable for that end, and that Sir Robert Peel and the Government of the day declined to entertain a proposition of that nature?—I never heard that.

2686. Are you not aware that in the establishment of the Museum of Irish Industry, Sir Robert Peel had particularly in view the great distinction which it was desirable to establish between the functions of the Museum of Irish Industry which he was then about to form, and the functions of the Royal Dublin Society, viz., that the functions of the Royal Dublin Society should continue, as heretofore, exhibitional, while those of the Museum of Irish Industry should be educational?—No, I was not aware of what was the partition pointed out until we received the Minute of 1854. The way in which the Museum became converted into an educational establishment was, in fact, by removing the educational branches, heretofore carried on by the Society, to it.

2687. Therefore, it must have occurred to Sir Robert Peel that the Royal Dublin Society did not adequately fulfil the educational functions, which he thought might be better discharged by the Museum of Irish Industry?—A new system was started at that time, which, judging by the Report of 1854, it was contemplated that the Society should not carry out. The Report of 1854 declared that the Government, seeing that it was desirable to carry out a more perfect and extended system of industrial education throughout the country,

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adopted this plan of having a certain number of lectures transferred to Stephen's Green. The Royal Dublin Society were very unwilling to lose their professors and their educational functions, and to become merely exhibitional; and they, therefore, remonstrated, and it was on that remonstrance that that modification of the creation of the committee of lectures was made, by which arrangement the two institutions were, as it were, linked together.

2688. There can be no doubt that Sir Robert Peel's views were to keep them distinct?—I presume so.

2689. Do you believe that the circumstances of the country are now so changed as no longer to render the maintenance of that distinction profitable to the country which, in the eyes of a man who took so great an interest in the welfare of Ireland, was then thought necessary?—My humble opinion is, (I can only state my own belief), that the Society can fulfil any educational functions imposed upon it. It has had for nearly a hundred years lecturers attached to it; they have been the most eminent men that could be obtained at the time. The Society had a very small grant for those educational purposes, and the lecturers were merely to give what are called popular lectures, and they gave them with great benefit to the public; but a systematic course of instruction was never proposed to them to be carried out. That was a new thing that was first called into existence, at least, so far as Ireland was concerned, by the Minute of 1854, and at that time the Society said, in a Report which I hold in my hand, which was presented to the Government at the time, that they were ready and capable of doing what was proposed in that Report.

2690. It is still your opinion, that, supposing the amalgamation were to take place, the Royal Dublin Society would be able to exercise the functions hitherto performed by the Museum of Irish Industry, with so much efficiency and success?—I believe so; at the same time I wish to be understood that I do not express any wish on the subject, I merely give what is a mere cold opinion; I believe they can carry it out.

2691. Mr. *George.*] If the Government should determine that that should be done?—Yes.

2692. But the Society have never asked that it should be done?—No.

2693. Sir *Robert Peel.*] Would they be indisposed to ask for it; would they prefer to leave things as they are?—It would be difficult for me to answer for the Society.

2694. Sir *Edward Grogan.*] With regard to the Museum of the Royal Dublin Society, what is the present condition of the Museum?—The Museum consists of two large apartments, 200 feet long by 40 feet wide each; the upper room, which is the main room, consists of a floor and two galleries which run round it; a little more than a quarter of the first gallery is supplied with glazed cases; several glazed cases, not all of the same pattern, in consequence of the old cases being mixed up with the new, stand on the floor. The upper gallery has a series of cases for the exhibition of minerals, running round the hand rail of the gallery, but the under apartment is entirely destitute of furniture and fittings.

2695. The building is completely erected?—The building is complete.

2696. Is it in a fit condition to exhibit the objects in the Society's possession?—Certainly not.

2697. Not in any one of the rooms?—No.

2698. The rooms being only half furnished?—Not more than a fourth furnished.

2699. You want money from Parliament to enable you to furnish those rooms for the benefit of the public?—Yes.

2700. Is it within your knowledge that the Society have in their possession a large collection of minerals and fossils, and objects of that kind, intended to be placed in those rooms when they are ready to receive them?—Yes.

2701. A large collection?—Yes.

2702. Has the subject been brought under your notice officially by the gentleman in charge of them?—Not officially; he has acquainted me with it from time to time, and I know it myself.

2703. Are you aware of the nature of the collections?—Yes; I am very well acquainted with them. We have a very large collection of birds, about 2,500, are unstuffed and in boxes in the store-rooms of the house. There is a small collection of mammalia, which is occasionally enlarged by donations. We have a very large collection of shells, not more than half of them being displayed to the public view. We have a very large collection of minerals, which I believe, with the exception of the British Museum, is considered to be the largest collection of minerals in any museum in the kingdom, only about half of the specimens being displayed.

2704. Are you able to say whether there is any large collection of carboniferous fossils?—There is a good collection of carboniferous fossils, presented by Sir Richard Griffith, of yellow sandstone fossils, a very fine collection of sub-fossils, such as the cave bear; the extinct elephant and deer, and such like—a large collection, but not displayed.

2705. It has been stated in evidence to the Committee that there was only one case exhibited of fossils of that character; does that arise from want of cases to exhibit them or from want of specimens to exhibit?—From want of cases.

2706. Are those collections acquired by purchase or by gift?—The purchases are few indeed in the Museum; they are mostly all gifts.

2707. What is the amount allocated of the Government grant to the Museum?—£. 650 altogether.

2708. £. 650 is all that is allowed by the Government for the maintenance of that branch of the Society?—Yes, including 250 *l.* for the salary of the Director; 150 *l.* for the Professor of Mineralogy; and 54 *l.* 12 *s.* for the wages of the porters.

2709. £. 450 of that goes in payment of officers' salaries?—Yes. Then, for specimens, preparations, freights, and contingencies 195 *l.* 8 *s.*, making a total of 650 *l.*

2710. Can you say how much of that 195 *l.* 8 *s.* is applied to the purchase of specimens?—I think, on the average, about 30 *l.* a-year.

2711. It has been stated that a large proportion of the balance is expended in freights of the donations which persons make to the Society; is that the case?—A very large proportion is expended on freights.

2712. You have a large collection, but you are unable to prepare it for display from want of funds?—Certainly.

2713. How are the specimens of Zoology prepared

pared now for exhibition?—There is one attendant, who has been instructed by Dr. Carte in the manipulation of skinning and stuffing of animals; he is the only person whose duty it is to carry that out.

2714. *Chairman.*] Are those specimens arranged on any particular principle; is the arrangement a general one or a typical one?—Typical, as much as possible. It would be quite impossible to make it a general museum.

2715. Sir *Edward Grogan.*] Your purchases are limited to about 30 *l.* a year?—Yes. For ten years the whole amount spent in purchases was 373 *l.* 10 *s.*

2716. *Chairman.*] Who is responsible for the purchases?—The committee and the director. The director informs the committee that it is desirable a certain purchase should be made, and he advises with the committee upon it. Many of the committee are naturalists themselves, and when they hear of collections for sale, they bring it before the director, so that it may be considered as a mutual council of the committee and the director.

2717. Sir *Edward Grogan.*] You have applied to Parliament for a grant of 4,500 *l.* for the purpose of making the museum rooms fit for the exhibition of those collections?—Yes; the sum of 4,500 *l.* has been applied for, for completing the building and having it furnished with cases for receiving those collections.

2718. With regard to the Botanical Gardens, has the recent arrangement made of opening them on the Sunday worked satisfactorily?—Perfectly, with one exception; there is not room for the people in the conservatories, and I have understood from the curator that there is a great deal of difficulty in passing through. The passages are exceedingly narrow, and the dresses of the ladies knock down some of the pots.

2719. Has any proposition been put forward by the Society for increasing the accommodation there, in order to obviate that inconvenience?—There has been a proposition put forward by the curator, Mr. Moore, for doubling the houses of the conservatories, in the same way as they are at Kew.

2720. Have the Society approved of that?—The committee and the Council have approved of it; it has never come formally before the Society. No doubt they would approve of it, because it is perfectly obvious such a thing is required.

2721. Is there any other pressing want in that department?—There is a very pressing want for a museum. We require a building for a museum of economic botany, similar to that at Kew; we have a nucleus for such in the collection formed after the Exhibition of 1853, which is a very valuable collection of specimens. I am sorry to say they are becoming decayed, in consequence of the unsuitableness of the present building. If a sum were allocated for building a suitable house for such a purpose, it would become one of the most useful and instructive adjuncts of the garden.

2722. You think it most important that that should be carried out for the benefit of the public?—Certainly; it is as much required in Dublin as it is in London or Edinburgh.

2723. In the application you made for a special grant was that item included?—Yes. It was estimated roughly at 1,000 *l.*; but lately the architect of the Board of Works has made an estimate for it, and he has put down the sum at 3,000 *l.* for the erection of this building and the fittings.

2724. Mr. *George.*] Where are those specimens now?—In the iron house in the gardens.

2725. Sir *Edward Grogan.*] Has any proposition been made to increase the salary of the curator, on the ground that it is inadequate?—There has been a desire expressed on the part of the Society that he should have a slight increase—an increase of 25 *l.* a year. It was increased by 25 *l.*, with the assent of the department, when the gardens were opened on Sunday; but the Society are anxious that it should be increased to 225 *l.*

2726. There is a grant annually made of 150 *l.* or 160 *l.*, in addition to what was formerly made, in consequence of the opening of the gardens on Sunday?—Yes.

2727. Does that increase of salary of 25 *l.* form any part of that?—No.

2728. That extra grant appears to be applied exclusively to police?—That is an erroneous statement introduced into the estimate; it is not strictly applied to police, but to pay the ordinary workmen additional wages for attending on Sundays, to pay for additional labourers required on other days in putting the place into order after the great concourse of people on Sundays, and for sundry contingent expenses, such as gravelling, &c.

2729. Did the Committee approve of this increase in the salary of the curator?—Decidedly; it was on their recommendation, as well as on that of the Council and Society, that it was given.

2730. Does the Botanical Garden depend on donations to any extent for its specimens?—Yes; the quantity of purchases made in the Botanical Garden is very small indeed; I believe smaller than those made in the museum. The curator is sent on a tour every year; he goes to foreign countries, and effects exchanges with foreign botanical gardens and similar establishments, to a very great extent. Last year he visited Norway and Sweden. And the Committee should be aware that two years ago he obtained in this way the finest tree-fern that exists in the United Kingdom, from a lady in the south of England, which is of great value.

2731. Is not there an arrangement by which young men are taken into the garden and taught gardening?—The arrangement is a private one made with the curator. Young men enter themselves as apprentices to him.

2732. Thereby spreading a knowledge of gardening in its highest departments throughout the country generally?—Yes, and of botanical science.

2733. Is there any peculiar privilege granted to the members of the Society of recommending young men for admission as apprentices?—No.

2734. How are they admitted?—The curator himself admits them. The curator takes in those young men on the payment of a small fee.

2735. Have any complaints been made of the insufficient extent of the present garden?—The curator has frequently called attention to the fact that there is a piece of ground adjoining that it would be very desirable to acquire, in order to extend the grounds. This contains five or six acres, which in the course of a few years must fall in to the Society, and the curator is anxious to anticipate that time and get that ground.

2736. In regard to the arrangements of the

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garden itself, is the garden so arranged as to be of the greatest benefit to the public, there being a special garden for plants used in medicine, and in the Arts, and so on?—It is admirably arranged in that respect. We have in one garden the botanical arrangement, in which the natural system is adopted, and which may be said to be the scientific garden; that does not apply to the conservatories, in which, of course, plants of different orders are placed side by side. Then there is the economical garden, in which plants used in the Arts, in dyeing, tanning, and so on, are placed together. There is a section for medicinal plants; also one for forage plants, and plants used for food.

2737. Therefore, a person desirous of studying the nature of those particular species of plants has great facilities for doing so in those special gardens?—Yes; and a useful little handbook has been prepared by the curator which gives the fullest information on all those points.

2738. Is fuel an expensive item in the expenditure of the garden?—Very large, indeed, and it is increasing; for, with the addition of the large houses, of course, large consumption of fuel must take place. The present consumption is hardly sufficient to meet the present wants of the garden.

2739. Is the grant inadequate for the purpose of the garden?—Quite inadequate.

2740. You have no means of supplementing that grant?—No.

2741. Has any application been made to Parliament on the subject?—No application has been made to Parliament for an increase of the annual grant, because the Society are anxious to have their house put in order before they send in any application for an increased grant; but recently the question of an increase of the grant for the expenditure in the garden department has been considered by the Council.

2742. Is it the case that people who have discovered any new manures, send them to the garden to be experimented upon?—Yes.

2743. Their value is there tested practically?—Yes.

2744. Has that been found to be useful?—Most useful.

2745. Is there a professor of botany connected with the Society?—The professor of botany, Dr. Harvey, is not exactly connected with the Dublin Society further than that his services are available to a certain extent. He is one of the professors of the Department of Science and Art common to the Museum of Irish Industry and to the Royal Dublin Society.

2746. It is recommended by the Commissioners that the professorship of botany should be attached to the Royal Dublin Society?—Yes.

2747. In immediate connection, I presume, with the Botanical Garden?—I presume that is what is meant, that he should be in connection with the Botanical Garden.

2748. Are these lectures given on botany by the professor of botany?—He gives one course of lectures in the garden itself, chiefly for the benefit of the gardeners and apprentices. The lectures are given at a time of the day which is more for their advantage than that of the public.

2749. Is it within your knowledge that those lectures are well attended?—Yes; on one occasion, when Dr. Harvey was unable to give them from ill health, there was a very general expression of regret that they were not given then.

2750. Is there any examination after the lectures so given?—Yes, the examination takes place in the Stephen's Green Museum.

2751. You were in the room when Lord Talbot de Malahide was examined with regard to the Agricultural Department?—I was.

2752. Do you concur in the views expressed by his Lordship?—Quite; the Agricultural Department we look upon as one of the most valuable attached to the Society.

2753. You consider that building over Shelbourn-yard a matter of the greatest importance to the Society?—We could not hold our show now unless we had it, it having been decided that they should not be held any longer on the lawn.

2754. In the sum which you ask from Parliament, as a special grant, is 1,000 *l.* appropriated to the roofing of that space?—£. 3,000; that 3,000 *l.* is for the purpose of purchasing up that ground, and the head-rents; it is not for buildings at all on that ground.

2755. You consider yourselves justified in asking that sum from the Government, inasmuch as you propose to capitalize the rent of the other building?—Yes, it was on that ground that we asked it; the lawn was rendered by the erection of those two buildings which have been constructed on it, an inappropriate place for cattle shows, and exhibitions of that kind; the opportunity presented itself of making an offer for this ground, and we were therefore very anxious to obtain it, and it has been obtained through the kindness and liberality, I may say, of our private members, who have agreed to hold themselves personally liable to a certain extent for the amount of the purchase; they have had the hope that Parliament would grant the money, or at least that the Government would recommend it, and, therefore, they have looked forward to the time when they will be released from their responsibility. I have here the deed of guarantee; Sir Richard Griffith signs it for 500 *l.*, Mr. Sanders 100 *l.*, Mr. Woods Maunsell 100 *l.*, the Lord Justice of Appeal 200 *l.*, and so on.

2756. If you do not intend to appropriate any part of the 3,000 *l.* you have asked for from Parliament, to the building on Shelbourne-yard, out of what fund is it proposed to erect the building?—The Society hope to be able to do that themselves. There stands at present on that ground a building which has been erected for the accommodation of the machinery in motion at the Exhibition of Manufactures, at a cost of about 1,600 *l.*; and should the receipts of the Exhibition not cover the expenditure, the contractor will remove the building and allow about 500 *l.* for it, the guarantors being liable for the difference; so that the Society on paying the sum of 500 *l.*, will become absolute possessors of the building.

2757. It has been stated to us that the agricultural shows have been progressively improving in quality and in productiveness?—Yes, the number of animals sent is not quite so great as some few years ago, but the quality is improved. When it is taken into account that the fees charged for the entries of cattle are very much larger than they were then, it may be taken that the shows are of more importance; if not larger, they are more select.

2758. What is the amount given by the Society in aid of those shows?—£. 250, out of which 50 *l.* is paid for the salary of the superintendent of the shows, who is also curator of the museum

museum of agriculture, and 13 *l.* for porters; the remaining 187 *l.* going in aid of the funds of the shows.

2759. Is there any reasonable prospect of the shows being self-supporting in every sense?—Yes, after the completion of this building we shall have the shows, I am quite sure, self-supporting.

2760. Supposing the building in Shelbourne-yard be completed, and the yard transferred to the Society, would the premises belonging to the Royal Dublin Society afford ample room and accommodation for any exhibitions?—Undoubtedly.

2761. Is there a professor of Agricultual Chemistry attached to the Society?—Yes.

2762. He makes analyses of earths, waters, manures, and so on?—Yes; and he gives two courses of lectures in the year, and also gives laboratory instruction to pupils.

2763. Does he give that laboratory instruction in a special laboratory attached to the department?—It originally was a general one; but since the arrangement made by the Department of Science and Art in 1854, the laboratory has been exclusively confined to Agricultural Chemistry.

2764. In what state is that laboratory, as regards apparatus?—The apparatus, I should say, for the purpose for which it is used, is in a very efficient state. The only drawback is that the yearly sum allowed for chemicals and keeping up the apparatus is rather meagre, and probably the analyses, and so on, cannot be carried on so extensively as they otherwise would, if the laboratory were better supported; but the laboratory, as a laboratory, is a very good one indeed.

2765. If the proposed amalgamation of the two institutions should take place, inasmuch as laboratory instruction constitutes a large branch of the education afforded in the Museum of Irish Industry, would the room now used as the laboratory of the Royal Dublin Society be adequate for the purpose of laboratory instruction?—I think it would. I hold in my hand a memorandum furnished to me by Professor Davy, with respect to the chemico-agricultural department:—

"The duties of the officer connected with it are—1. To deliver annually, in the Society's theatre, two courses of public lectures on chemistry applied to agriculture; 2. To give practical instruction to working pupils, in the Society's laboratory, in Analytical Agricultural Chemistry; 3. To perform analyses of soils, manures, agricultural produce, &c., for the members of the Society and the public, according to a regulated scale of moderate charges; 4. To undertake such investigations of a chemico-agricultural nature as the Society or the Council may from time to require; 5. To be responsible for the efficiency of the Society's agricultural museum; 6. In addition to the duties specified, the officer has to prepare the examination papers, both for the registered pupils attending his public lectures, as well as for those belonging to his laboratory class, and also to examine the answers of the candidates competing for the awards offered by the Society for superior answering in the subjects treated of in the public lectures and practical laboratory instruction.

"11,885 persons attended the 102 lectures delivered during the last five years (the time since the re-establishment of this professorship), which gives an average of 116 persons for each lecture. This, considering that the subject cannot be made so experimental, and consequently must be less attractive to the generality of audiences than other branches of natural science that admit of much more experimental illustration, is a very fair attendance, and does not fall far short of the average number attending the most popular lectures on science delivered in the Society's theatre.

"During that period, 56 pupils registered their names as attending the lectures, and about to compete for the awards offered by the Society for superior answering, of which 53 finally underwent examination, amongst whom are the following:—Mr. John Dowling, Mr. Emerson Reynolds (who is now becoming known as an original investigator), Mr. William J. Wonfor, and Mr. Sydney Pontifex, both of whom have since been very successful pupils in the Museum of Irish Industry and elsewhere.

"Six courses of Practical Demonstrations in Analytical Agricultural Chemistry, each course averaging 20 in number, have been delivered during the last five years in the Laboratory, which was attended by 48 working pupils, giving an average of eight for each course.

"During that period, up to the close of last year, 218 analyses and examinations have been made for the members of the Society, the public, and for original research.

"The Professor of Agriculture is also responsible for the efficiency of the Agricultural Museum, and has, since his appointment, afforded the curator of the Museum much assistance in the arrangement and improvement and improved classification of the specimens there exhibited, being enabled to do so from his having visited several of the British and Continental museums of agriculture, and is now engaged in making out a food collection for it, as in the South Kensington Museum; but in this useful undertaking he is much crippled by the want of a chemical assistant, and the insufficient funds for working his department."

2766. You have stated that it is part of the duty of the Professor to make analyses for members and others applying for them; is he called upon to do that frequently?—Yes; he makes a large number during the year for payment.

2767. You have also stated that practical instruction in chemistry is given, in the laboratory, to the pupils attending his class; what fee do those gentlemen pay for that instruction?—I think it is the same as in the Museum of Irish Industry. I think the fee for the course of lectures is 3*s.* 6*d.*, but the fee for the laboratory course is 1 *l.*

2768. Is that the fee charged in the Museum of Irish Industry?—I believe it is the same.

2769. You mentioned that the Professor was a gentleman of the name of Davy; is he any connection of the late Professor Davy?—He is a son of the late Professor Davy, who was for a long time connected with the Society, and I believe he is a grandnephew of Sir Humphrey Davy.

2770. He has not raised any objection to acting as Professor under the Royal Dublin Society, has he?—No; he has always been connected with the Society.

2771. As to the Agricultural Museum, what state is it in?—It is in a very fair state; it is not placed in a very attractive-looking building, but the building is tolerably appropriate for the purpose. The building was formerly the stabling attached to Leinster House; altogether it has a very agricultural look about it. The under part is rather

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rather damp, but it has been very much improved of late by having additional lights placed in it.

2772. Are there not scientific meetings held from time to time at the Dublin Society, at which scientific papers are read?—Yes, there are monthly scientific meetings, at which any person is at liberty to read papers on any scientific subject; and such of those papers as are considered worthy of publication and suitable are published in the Society's Journal, which is published at the expense, and not out of the Parliamentary Grant. I should mention that one great advantage of the journal is that it is sent to all foreign societies, and we get a very large number of journals of their proceedings in return.

2773. Is it necessary to ask permission from the Council of the Society to read a paper?—A person desiring to read a paper, unless he is very well known, must submit the paper to the Committee Evening Meetings, who ascertian whether the subject is a suitable one or not.

2774. What are the expenses attending those evening meetings, and out of what fund are they defrayed?—The expenses attending them, including the publication of the Journal, are about 200*l.* a year, and they are provided for entirely out of the fund arising from the subscriptions of the members

2775. There is an exhibition of manufactures at present going on; I believe the Society assists that exhibition also?—Yes; there is a small grant in aid of these exhibitions, of 150*l.* a year, which is allowed to accumulate for three years until the time of the exhibition is about to take place, when it may be considered to be sufficient in amount to start it; but latterly those exhibitions have grown so very large that we are obliged to look to the general public to guarantee their expense. For instance, for the one going on at present, there is a guarantee fund subscribed, amounting to upwards of 10,000*l.*, though we only asked for 3,000*l.* A large number of those guarantors are members of the Society. The Society has no means whatever to pay for any loss that may arise from those exhibitions, and the public has generously come forward on this and other occasions, and in effect said, "If you hold the exhibition, we will bear the loss if there be one."

2776. The exhibitions are carried on under a Committee of the Society?—Yes, the Committee of Manufactures.

2777. One of the Standing Committees appointed by the Society?—Yes.

2778. The readiness of the public to contribute to the guarantee may be taken as an indication of the confidence felt on the part of the public in the management of the institution?—No doubt.

2779. If there were any distrust on the part of the public respecting the way in which those exhibitions are carried on, do you think that the public would join that guarantee fund?—I do not think so.

2780. Has there been any consideration on the part of the Council with regard to the present position of the Society and the funds necessary to place it in full working order?—Yes. I have two returns here, which have been prepared by the Council carefully during the Whitsuntide recess. One return shows the sums that would be necessary to complete the several departments of the Society, and the other shows the sums that would be required to properly maintain it, if those departments were put into a state of efficiency.

2781. Does the first estimate to which you have referred, namely, the money necessary to put the Society in full working order, fall short of or go beyond the 9,500*l.* which you originally asked for?—It goes beyond it. These are the items: For the Museum of Natural History, 4,500*l.* (that is the same as we have already asked for); Library fittings, and furniture for the General Library, 1,000*l.*; and for Dr. Joly's Library, 405*l.* 10*s.* We have already asked for 1,000*l.* for the Library; therefore that is an increase of 405*l.* 10*s.* For the Botanic Gardens the original estimate put in was 1,000*l.*, for the erection of a Botanical Museum. On application to the architect of the Board of Works he gave me the following items, which have been approved of by the Council. Museum of Botany, and fittings for same, 3,000*l.*; doubling the conservatories, 3,000*l.*; nursing and propagating houses, 425*l.*; Curator's residence (which in a very few years will fall of itself), 700*l.*; and apartments for pupils (which are necessary to be put up in case the conservatories are doubled, because the present pupils' apartments are at the rear of the conservatories), 300*l.*; and for completing the large palm-house, 230*l.* That makes 7,655*l.* for the Botanical Gardens, the sum asked for before being 1,000*l.* Then the Agricultural Department 3,000*l.*, as before; making a sum total of 16,605*l.* instead of 9,500*l.* (*The Estimate was handed in.*—Vide *Appendix.*)

2782. That estimate which you have just handed in has been recently carefully considered by the Council of the Royal Dublin Society?—Yes. The other estimate gives the sums that would be required for maintaining the several departments when once those departments were put in order. *Agriculture:* Professor's salary to be raised from 150*l.* to 200*l.*; that is the sum recommended in the Report of the Commissioners. In this Return the present scale and the proposed scale are both placed side by side. Curator of Museum and Superintendent of Shows, salary 150*l.* It is recommended that he phould have 25*l.* additional. He is a most deserving officer, and, if it were not for him, our agricultural shows would not be so efficiently conducted as they are. Laboratory porter's wages, 52*l.* That would be the same under the proposed scale. Then museum porter's wages, 26*l.*; that would be the same. Museum contingencies, 62*l.*; that would be the same. Temporary contingencies, 120*l.*, which was a temporary vote for putting the Museum in order; that is struck out. Then, for prizes at shows, 107*l.*; that is the same. Laboratory expenses, raised from 28*l.* to 50*l.*, those being short every year; in fact, 28*l.* is not at all sufficient, and that is increased to 50*l.* for the purchase of chemicals and apparatus; and an assistant chemist is added, at 100*l.*

2783. Do you know the amount applied to laboratory expenses in the Museum of Irish Industry?—I believe it is 100*l.*; in the Museum of Irish Industry there is an assistant chemist, an officer which we also have applied for. Such an addition is quite required, for it is not within the power of a single man to do all the work of the department which he has under him, giving lectures, and performing analyses, and so on. Then I come to the *Botanic Garden.* The curator's salary would be raised from 200*l.* to 225*l.* Then there would require to be a curator of the Botanical Museum, if it should be established, whose salary is put at 75*l.*;

75 *l.*; rents would be the same, 163 *l.*; labourers' wages, fuel, and incidents are raised from 983 *l.* to 1,363 *l.*; it is quite impossible to get on with the small number of hands and the low rate of wages at present paid to the men. Then there is the extra sum for Sunday opening, 150 *l.*, which is the same in both cases. The total sum on the proposed scale, for the Botanic Garden, would be 1,976 *l.* (which is not a very large sum for the maintenance of a garden of 43 acres in extent), as against the present scale of 1,496 *l.* Then, the *Museum of Natural History:* the Director's salary at present is 250 *l.*, and it is proposed to raise that to 300 *l.*; his whole time is occupied. The salary of the Professor of Mineralogy and Mining, and Keeper of Minerals, is proposed to be raised from 150 *l.* to 200 *l.* Porter's wages (three additional porters being required), making 200 *l.* instead of 54 *l.* 12 *s.*; when the public are admitted, we require a man constantly in each room; in every room in the British Museum there is an attendant. For contingencies, purchase of specimens, outfit for lectures, and mineralogical expenses generally, 195 *l.* 8 *s.*, was allowed. It is proposed to increase that to 550 *l.* Then it is proposed that there should be two assistants in the Museum, 250 *l.*, that being a new item, and a taxidermist at 100 *l.*

2784. Is there any person connected with the Society who is a taxidermist?—Only the porter I have spoken of, and who is tolerably well skilled. He has been taught the art of stuffing bird-skins by Dr. Carte. He gets a salary of only 50 *l.* Then, retiring allowance to Dr. Scouler, 100 *l.* The total proposed scale for the Museum of Natural History being 1,700 *l.* as against 650 *l.* Then, in the *Library*, we have librarian's salary, 200 *l.* That would be the same under the proposed scale; and clerk's salary, 90 *l.*, that would also be the same. There would require to be two additional porters for attending to the library, if the library were opened two or three additional evenings of the week, and that item would be raised from 91 *l.* to 200 *l.* Then, for the purchase and binding of books, 500 *l.* is at present allotted; and for incidental expenses, 49 *l.* 8 *s.*, making 549 *l.* 8 *s.* We have applied for 1,500 *l.* for the purchase of books and binding. The total increase for the library is from 930 *l.* 8 *s.* to 1,990 *l.* Then *Establishment*—The Assistant-Secretary's salary is increased from 300 *l.* to 400 *l.* The registrar and housekeeper's salary from 200 *l.* to 300 *l.* The salary of the Secretary's clerk from 75 *l.* to 120 *l.* He is the only officer I have to assist me, and his whole time is taken up; he is so efficient, that he can attend Committees and Councils when I am absent. The salary of the Registrar's Clerk is proposed to be increased from 40 *l.* to 60 *l.*; and the hall porter's salary from 52 *l.* to 60 *l.* Four porters to be increased from 156 *l.* to 180 *l.*; two additional are proposed to be added at 39 *l.* each, making 78 *l.* Three housemaids, as at present, 72 *l.* 16 *s.*, and three additional are proposed to be added, making 54 *l.* Then, pensions to two late masters of the School of Art, the same as before, 49 *l.* 19 *s.*, making for the establishment a total of 1,374 *l.* 15 *s.* as against the present scale of 945 *l.* 15 *s.* Then *Incidentals*—printing, stationery, and advertising would be 450 *l.* as against 350 *l.* at present. Fuel and light 250 *l.* instead of 182 *l.* Insurances would be increased from 57 *l.* to 150 *l.* At present the insurances are quite inadequate. Liveries would be increased from 80 *l.* to 108 *l.* Incidentals—house, sundries, and cleansing would be increased from 33 *l.* 17 *s.* to 100 *l.*, and additional liveries for new library porters and museum porters, 54 *l.*, being an increase in incidentals from 702 *l.* 17 *s.* to 1,112 *l.* The total increase being from 5,650 *l.* to 9,204 *l.* (*The Estimate was handed in.*—Vide *Appendix*.)

2785. That estimate has been prepared by the Council of the Royal Dublin Society?—Yes.

2786. Had most of the items of increase, specified in that estimate, been already brought under the notice of the Commissioners in the evidence taken by them?—Not all of them.

2787. Most of them?—Some of them had. Those with reference to the Botanical Gardens had. With respect to the Museum of Natural History, the Committee sent to the Commissioners a much larger estimate in than is put down there; but the Council reduced it.

2788. Had the salaries of the officers?—Not in a very definite shape.

2789. Mr. *Waldron.*] On what ground?—They thought that it was too large compared with that for the rest of the institution.

2790. Sir *Edward Grogan.*] If the amounts included in those two estimates, the one for putting the Society in a proper state, and the other for its annual maintenance in a proper and efficient state, were granted, the Society might then be considered to be in efficient working order?—Certainly.

2791. If it be ultimately decided to carry out the proposed system of amalgamation referred to in the Report of the Commissioners, what additional expense would then be required beyond what you have now stated?—I do not think it would require any additional expense to carry out the proposition for amalgamation as proposed by the Commissioners.

2792. I presume that the popular lectures that have been given in the Society are very highly valued by the members themselves?—Chiefly, I think, by the public. They are valued by the members too; but I think it is by the public at large that they are valued, judging by the large attendance.

2793. Was the experiment ever tried of making a small charge for admission to those lectures?—Yes; after the year 1836 it was tried for a short time, and it was obliged to be abandoned, from the small number of people who availed themselves of it.

2794. The object of the lectures was defeated by making a small charge; the public did not attend?—Not in any great numbers.

2795. The present system is found to work beneficially?—Yes; and the opinion of Sir William Hamilton, at the end of the Report of the Committee of 1836, is very strongly in favour of those free popular lectures.

2796. It has been stated in evidence before this Committee that so strong a feeling is entertained with respect to the sectarian or political opinions of the members of the Royal Dublin Society that gentlemen have an objection to receive education within their walls; and that statement has been made particularly in connexion with the name of Mr. Dowling. Have you ever heard any objection of the kind raised before?—Never.

2797. Was Mr. Dowling ever a pupil of the Royal Dublin Society?—Yes.

2798. He attended the lectures?—Yes.

2799. Regularly?—I suppose so; and he underwent an examination and obtained a prize. I

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have the examination-paper here which he wrote himself.

2800. Therefore, the statement that was made, that he entertained a strong objection to placing himself under the Royal Dublin Society, on account of the political or sectarian opinions of that body, could not have been well founded?—Certainly not; it must be a mistake altogether.

2801. Mr. *Waldron.*] Are you certain that it is the same person?—Yes; the paper in his handwriting settles the question.

2802. Sir *Edward Grogan.*] In fact, he did attend the lectures of the Society?—Yes; I have here a return of all the persons attending at the lectures and at the laboratory instruction; and this return not only refutes that statement, but also another that was made, that only two persons paid for instruction in the Society's laboratory; for we have had a number varying from 10 to 15 who have gone in for examination for prizes each year in each of the two courses.

2803. Mr. *Waldron.*] Who could not have gone in for examination if they had not paid for the course?—Just so; they are registered pupils.

2804. Sir *Edward Grogan.*] What was the number of registered pupils?—I do not know the number of registered pupils, but 10 or 15 went in for examination.

2805. Probably the number of registered pupils would be considerably greater than those who went in for examination?—They probably would.

2806. What was the average number of those attending at the examination?—It varied from 10 to 15.

2807. You are speaking of the examination in agricultural chemistry?—Yes.

2808. If, therefore, it has been stated to this Committee that the number of paying pupils for laboratory instruction was only two, that would not be correct?—Certainly not. I may also mention that, looking at the returns of pupils who have obtained prizes in the Museum of Irish Industry, I find amongst them the names of many who were pupils in the Royal Dublin Society.

2809. Attending at both?—Yes.

2810. A statement has been made to the Committee that, when the Zoological Society gave some public lectures in the Theatre of the Royal Dublin Society, the members of the Zoological Society were unable to obtain accommodation in consequence of the seats being preoccupied by members of the Royal Dublin Society; is that the case?—I think that there must have been some mistake about that. I have taken some pains to look into that matter, and I find that at the courses of lectures given in the theatre, about two years ago, the theatre on no occasion was full.

2811. *Chairman.*] How many persons is the theatre capable of holding?—Between 400 and 500.

2812. That includes the part devoted to members, and the other part?—Yes. The only occasion upon which the Royal Dublin Society lent its theatre to the Zoological Society for the purpose of lectures, with which I am acquainted since my appointment in the year 1853, was in the year 1861, when six lectures were delivered by lecturers appointed by the Zoological Society. The numbers attending them were 95, 147, 145, 176, 178, and 325, and, inasmuch as the theatre accommodates between 400 and 500 persons, it is impossible that the inconvenience referred to could have then taken place. There were other courses of lectures given by the Zoological Society some years ago, long before I had any connection with the Society. I asked a member of the Society, who was then and is still a leading member of the Zoological Society, whether any member of the Zoological Society was prevented attending, in consequence of the room being filled by members of the Royal Dublin Society? and he said that there was one gentleman only who went in as a member of the Royal Dublin Society, not being a member of the Zoological Society, and that gentleman's name he mentioned to me.

2813. Every gentleman in the room on that occasion, except one, was a member of the Zoological Society?—Yes, or had to obtain a ticket of admission.

2814. Or who had obtained a ticket, given him by the Zoological Society?—Yes.

Mercurii, 8° *die Junii*, 1864.

MEMBERS PRESENT:

The O'Conor Don.	Mr. Lefroy.
Mr. George.	Sir Colman O'Loghlen.
Mr. Gregory.	Sir Robert Peel.
Sir Edward Grogan.	Mr. Waldron.
Mr. Leader.	Colonel Luke White.

WILLIAM HENRY GREGORY, Esq., IN THE CHAIR.

WILLIAM EDWARD STEELE, Esq., M.D., called in; further Examined.

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2815. Sir *Colman O'Loghlen.*] WHO prepares the estimate that is forwarded to the Science and Art Department?—The Registrar of the Society, Mr. White, who, in the first instance, submits it to the Finance Committee, and he then gets the authority of the Council for it.

2816. Is there any difference between the estimate forwarded for the year 1864, and the previous estimates, in any material item?—There was an estimate sent in on our part, which has not been followed out in the printed estimate of the Department of Science and Art to be laid before Parliament.

2817. That I believe is from a mistake?—So I understand.

2818. Look at the item for rent and taxes?—Rents, rates, taxes, and insurances in the year ending 1864, 503*l.*; for 1865 it was put in 220*l.*; it was reduced by the sum of 283*l.*

2819. What does that 283*l.* represent?—It represents the rent of the lawn.

2820. By whose direction was the rent of the lawn taken off the estimates?—By the direction of the council.

2821. Were you present when it was done?—Yes.

2822. Can you state the reason why it was taken off the estimates?—The reason was that as the society had given up holding cattle-shows on the lawn, and as it appeared to be more in the nature of a private lawn, and less for the public use than it had hitherto been, except as regards the erection of the buildings for the Museum and National Gallery upon it, they thought that the public money should not appear to be paid for it in future.

2823. Was not the reason in order that there should be no ground for saying that the lawn was public property, or was paid for by the public?—There was no reason of that kind stated, but it came to that.

2824. Had it anything to do with the question of the rent of the National Gallery?—I am not at all sure but that it might.

2825. I believe there was an allegation that if it was to be charged upon the estimates the Government would not pay the rent of the National Gallery?—I heard it so stated.

2826. This year, for the first time, the rent of the lawn has been taken off the estimates?—Yes; it may be said that for the first time, also, the lawn has practically been disused and put into order.

2827. The balance of 283*l.*, in order not to make any difference in the estimates, was spread over different items?—Yes; the fact is that the society (or the council, properly speaking) has frequently varied the estimates.

2828. I understand you to say that they have never before this year taken the rent of the lawn off the estimates?—Never till this year.

2829. Sir *Edward Grogan.*] This reduction, in respect to the rent of the lawn, enables you to apply to other branches of the society's operations which were deficient in funds the balance so saved of the public money?—Yes.

2830. And you propose to pay the rent of the lawn out of the private subscriptions of the members?—Yes.

2831. One reason being because, up to the present time, your shows have been held on the lawn?—Yes.

2832. And by the new arrangement which has been made, it is more to be regarded in the nature of a garden or lawn than heretofore?—That is the explanation.

2833. A good many questions were put to you on the last day relative to the Joly Library; do you wish to add anything now to your evidence upon that point?—I should wish to make this statement, as there was some misunderstanding as to what I said, which Dr. Sidney afterwards explained. Dr. Joly having, in the month of February 1863, announced to the Lord Lieutenant, who forwarded his letter to the Royal Dublin Society, his intention of making the remarkable gift of books and prints to the society, for the use of the members and the public, an estimate was obtained from the Board of Works for shelving the room now used as a public reading-room for the reception of the library. Applications were then made to the Government for the money, but without success; upon which the library committee decided upon removing the books out of two of the rooms which had been set apart for the natural history section of the library, and devoting them to Dr. Joly's library, and laid out some additional money in extending the shelving, so as to render the accommodation sufficient. Although the shelving of those rooms is of a very indifferent description, yet, in the absence of better, Dr. Joly appears to be satisfied with the provisions the society has made in the matter; and he has since been engaged himself in arranging and cataloguing the books. The

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money already applied for the purpose of shelving the Joly Library I find amounts to 405*l.* 10*s.*

2834. That is the amount of your application to Parliament for that purpose?—Yes; 405*l.* 10*s.* is now required in order to supply fittings in other rooms for the books so displaced.

2835. You being the assistant secretary of the society, I take it for granted that if any loss of books from the library, by reason of their being lent out, had occurred, it must have come to your knowledge?—Yes.

2836. Have you reason to believe that no considerable loss, or loss of any kind, has arisen from that system?—I have caused inquiries to be made as regards the losses in the library, and I have received information that there have been only six volumes of books lost through the lending books to members for the last 16 years, the value of which would be about 4*l.* 10*s*

2837. The lending principle, therefore, is no damage to the library, as regards the loss of books?—Almost none.

2838. Allegations have been made in this room by a witness, that the society did not give those increased facilities to the public for visiting the museum, the library, and the botanical gardens which were repeatedly required by the Science and Art Department; is there any foundation for that statement?—Within the last few years the different departments of the society have been thrown more open to the public than they had previously been; but with regard to the museum it is quite impossible, with the present staff of attendants, to open it to the public more days in the week. It is open three days in the week to the public generally, and on two additional days in the week at an admission fee of 6*d.*, but they are considered to be private or students' days. The museum consists of two large rooms, each being about 200 feet long by 40 feet wide.

2839. You are speaking of the new museum?—Yes. And consequently each room would have to be provided with two attendants at least, to watch the collections and give information to the public as they pass through.

2840. Does any analogous regulation with regard to close days, or days on which admittance is obtained on the payment of a small fee, in order to afford students an opportunity of conducting their studies in the museum without interruption, exist in any institutions in this country?—Yes. In the museum of the Department of Science and Art at South Kensington, there are what are called students' days, when admission can be obtained by anyone on the payment of 6*d.*, in the same way as at the Royal Dublin Society; and the British Museum is closed entirely (except to students) on alternate days: the public cannot obtain admission at all on alternate days. The National Gallery of Dublin is also closed two days in the week, which are allotted for the admission of students, in imitation of the practice of the Science and Art Department, which, I believe, has been found to work well.

2841. Independently, therefore, of the insuperable difficulty which you have described to us, with respect to the want of staff, to superintend and protect the property of the society in the museum when the public are admitted, you would still think it advisable to reserve certain days, for the benefit of students, on which the public should be admitted on the payment of a small fee?—Most decidedly: in all those institutions, if it be desired to make them useful for the purposes of study rather than for the mere curiosity of the general public, certain days must be set apart for students.

2842. Has it been customary to charge a small fee on those reserved days in the Royal Dublin Society?—Yes, just as at South Kensington.

2843. Is that in accordance with the recommendations of Dr. Playfair some years ago?—It is. I may also add that greater facility than that is afforded, because members have the privilege of giving an order for the introduction of any one who wishes it, without payment.

2844. As to the library, has the admission to that been extended?—The library has been open of late years in the evening, in addition to its being open from 11 to 5 every day; and with regard to the evening admissions, I would mention that the society have always agreed with the Science and Art Department as to the expediency of the library being opened in the evening; with this difference, that the Science and Art Department wished us to put a small charge upon the admission of persons to the library in the evening, which the society do not wish to do. They wish it to be free in the evening, and they wish also to be enabled to open the library every evening in the week for the public; that is to say, to the persons introduced in the manner which has been already described; but it is impossible to do that, in consequence of the limited state of our funds. It would require two additional porters at least, who would relieve the others that are in attendance in the daytime; for it could not be expected that the staff should attend all day long, and in the evening besides; they would have to alternate their attendance. Those are the principal reasons why we are so anxious to have not only an increased grant to put the library department into a state of efficiency, but also an increased grant for the maintenance; that is to say, to supply the increased cost of fuel, gas, and attendance. If that were done, the society would most cheerfully open the library every evening in the week.

2845. In fact, however, the society have given very greatly increased facilities to the public in respect of admission to those two branches of the society, the museum and the library?—Yes; I think, practically, as fully as any institutions here.

2846. What has been the case with respect to the Botanical Gardens?—With regard to the Botanical Gardens, about 10 or 12 years ago they were open upon only two days of the week; some slight increase was then made to the grant, in consequence of Dr. Playfair's Minute, and they were able to open them three days in the week free to the public, and on two days at 6*d.* for adults and 3*d.* for children, imitating, as it were, the practice with regard to the natural history museum. Subsequently to that there was a movement in Dublin, and I believe pretty generally elsewhere, for having Saturday made a half-holiday; and for the advantage of the public who were able to escape from their occupations in the middle of that day, the society added Saturday (from two o'clock) as a public day; the consequence is, there are two days only, Tuesday and Thursday, reserved as students' or private days, on which the public may obtain admission on the payment of 6*d.* for adults and 3*d.* for children. In addition to that, the gardens are open on Sundays, from two o'clock in the afternoon.

2847. In all these particulars, therefore, the objection

objection that the society did not afford increased facilities to the public was not well-founded?—No; I may add that if you wish to turn any botanical gardens to the advantage of students, in an educational point of view, I think there ought to be private days. I know with regard to the Botanical Gardens at Glasnevin, that remark especially applies, for the gardens are very generally used by lecturers on botany, who bring their class, and instruct them in the principles of the science from the living plants; and if the students were interrupted by the large number of the public who obtain admission on public days, I believe it would very much interfere with their instruction of the students.

2848. It was also stated in evidence before the Committee, that the present entrance to the museum from Kildare-street was considered to be inconvenient to the public, and that there should be another entrance to the museum from Merrion-square. What is your view upon that point?—The entrance at present is by far the most convenient for the general public, at least for the middle classes, as it is on the most populous side of the city. It is the general entrance to the society's building, so that anyone visiting it may go from one department of the institution to the other with facility. I can hardly suppose that it would be a desirable thing to make the house a thoroughfare (and the museum especially), which it would really become, were an entrance made on the Merrion-square side. The public then would really use it not for the purpose of visiting the museum so much, as they would as a short cut in going from Kildare-street to Merrion-square, or *vice versâ*.

2849. Mr. *George.*] Is there any entrance whatever to the museum from the lawn at the back of the house?—None whatever.

2850. You must enter the building from Kildare-street?—Yes, there is only a single entrance; all public institutions should properly have only one entrance.

2851. Sir *Edward Grogan.*] Are you aware of the extent of the laboratory belonging to the Royal Dublin Society; is it a commodious apartment?—The laboratory is a very large apartment. It is as large as laboratories generally are; probably not as large as the two laboratories together in Stephen's Green, but it is as large as the laboratory in Trinity College. It is the usual size of laboratories.

2852. Is it fully adequate in size for the instruction of any number of pupils who may resort there?—For the number of pupils likely to be taught practical instruction in the laboratory, it is.

2853. Have you any knowledge of the number of pupils who resort thither for instruction?—I will hand in a return of the number of students from the commencement, who have attended the examinations after the laboratory instruction.—(*Vide* Appendix.) By fitting up the adjoining rooms at the laboratory itself, I know that it could be made to accommodate from 20 to 25 students at a time.

2854. If it has been stated that pupils are admitted to the laboratory instruction without the payment of any fee, would that be correct?—No, certainly not. It has never been free. The payment is 1*l.* the course.

2855. Do you know whether the payment exacted for the special students in the Royal Dublin Society is more or less than the payment required in the Museum of Irish Industry?—I cannot say.

2856. If the statements have been made that only two pupils attended the laboratory instruction in the Museum of Irish Industry, and also that they did not pay for that special instruction, those statements are not correct?—No.

2857. Mr. *George.*] What are the dimensions of the laboratory?—The particulars will be found in a return which I will hand in. (*See* Appendix).

2858. Sir *Edward Grogan.*] Have you acted as a provincial lecturer under the committee of lectures?—Yes, on two occasions I acted as lecturer.

2859. What is your experience as to their utility?—I think them exceedingly useful. The lectures I gave in two provincial towns were very well attended. From 150 to 200 attended the lectures. The result, I know myself, in both cases, was to create a desire for prosecuting the study of botanical science amongst some of the towns-people.

2860. Was that the subject you lectured on?—Yes; botany applied to agriculture. One was in Dungannon, and the other in Auchnacloy. An examination at the last one, after the course was ended, and one young man, a draper's assistant in the town, took up the study of botany with very great vigour. Four or five years after the lecture he came to Dublin, on his way to Australia, and he brought me a large collection of dried plants, which he had collected in the neighbourhood, and correctly named. He had learned his first principles of the science at my lectures.

2861. His attention was first directed to the study of that science by your lecture?—Yes.

2862. You mention that as a practical case, within your knowledge, of the utility of those lectures?—Yes.

2863. What you have just stated, as to the utility of those lectures, hardly coincides with the opinion communicated to the Chairman, in a letter of Mr. Dowling. You speak of this as within your knowledge?—Yes, I speak of that as within my own knowledge.

2864. Has Mr. Dowling himself ever lectured?—No.

2865. Has he ever applied to be a lecturer?—I understand that he applied in May 1862, to be placed upon the list of provincial lecturers.

2866. Did he apply more than once?—Yes; he again applied in March 1863.

2867. At the time that Mr. Dowling made application to be placed on the list of lecturers, to give lectures in the provinces, was he connected with the schools of science under the Department of Science and Art?—I understand that he had been for two years engaged in teaching classes under the Science and Art Minute.

2868. He must have changed his opinion as to the utility of those lectures, if he applied to be a lecturer, and afterwards condemned them in the unmeasured terms we heard read out in this room?—I suppose so.

2869. You say that he never was a lecturer?—No.

2870. But he applied to be a lecturer?—Yes.

2871. Was he refused?—I believe so; I might add, that considering the great utility of those lectures, I quite concur with what the committee of lectures have recommended, that there

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should be an increase of the grant for them; that the grant should be increased from 500 *l.* to 1,000 *l.*

2872. I presume, from your office, you are necessarily acquainted with all the details connected with the school of art?—Yes.

2873. Will you state, shortly, how it is managed?—The school of art is managed according to the principles laid down for all schools of art in the kingdom, by the Department of Science and Art; in fact the council is the committee of the school.

2874. In other respects it is the same as any other school of art in the country?—Yes.

2875. The school is located upon the premises of the Royal Dublin Society?—It is located in a building specially appropriated to itself, a very extensive building; in fact the master states that the accommodation is better than that of any school in the kingdom; I will hand in a prospectus of the school (*the same was handed in—Vide* Appendix).

2876. You stated that the council are practically the managers of the school under the Department of Science and Art, like other managers of other schools in the country?—Yes; they are responsible for the management of it.

2877. Is that school supported to any extent out of the Parliamentary Grant to the Royal Dublin Society?—No; the school is entirely what may be called self-supporting; at least, it was intended to be self-supporting; but it is not really so, for the society has to supplement any loss that may arise from the students' fees out of its private funds; and I beg to hand in a return of the expenditure for the year ending 1863-4, which shows that the balance paid out of the society's private funds, was last year 135 *l.* 12 *s.* 1 *d.* (*The same was handed in.—Vide* Appendix).

2878. You have to supplement the school out of the society's private funds?—Yes.

2879. No part of the sum for the support of the school is drawn from the public grant?—None whatever.

2880. Is the school at present in an efficient state?—It is in a very efficient state. It has never been, since its establishment, in so flourishing a condition as now. The number of students is increasing, and the proficiency of the students has immensely increased. In the short time that the school has been under the management of Mr. Lyne, the present head master, much larger number prizes have been taken in four months' working than had been taken in twelve months previously.

2881. Do I understand you rightly, that the pupils under the present master, with four months' instruction, have made greater progress than with twelve months' instruction formerly?—Yes.

2882. Where were those prizes given?—In London. They were not given by the Royal Dublin Society. The pupils' works are sent to the Department of Science and Art to be adjudicated upon at South Kensington.

2883. Consequently there could have been no partiality to Dublin pupils, shown by those who awarded the prizes?—No.

2884. You mean that the works of the pupils executed in the Dublin school, are sent to South Kensington to compete with works executed by pupils in similar schools throughout the Kingdom?—Yes; that general competition takes place at a later period. The works are first sent over in competition amongst themselves for what might be called a pass examination, and medals, and honorary rewards, are granted for their intrinsic merits.

2885. Among the pupils of the school?—Among the pupils of the school; and those works that have obtained prizes are afterwards put into competition with the prize works from every school in the kingdom.

2886. What has been the result of that?—That will not be known for some time, for the examinations are not over all through the kingdom.

2887. Mr. *George.*] What do you mean by saying that the number of prizes taken in the four months was much larger than in the 12 months before; were there three times the number of prizes?—A larger number of prizes have been awarded on the four months' work than on 12 months' work the year previously.

2888. By whom?—By the Department of Science and Art.

2889. The pupils of the School of Art in Dublin have obtained, in four months, as many prizes at the examination in England, as they did in any 12 months previously?—Yes.

2890. Sir *Edward Grogan.*] Does the society give any prizes themselves to successful pupils in their schools?—Yes, every year they add some prizes. There is a small fund which they obtained from an art exhibition, of 200 *l.* or 300 *l.*, and which they invested as a nucleus for a prize fund; the dividends arising from that, though small, enable the society to give large and small silver medals; and those medals are mostly given in matters that the Department of Science and Art do not give prizes in. For instance, prizes are given for a knowledge of anatomy, as applied to the fine arts. Artistic anatomy is taught by a professor, who works gratuitously in the society; he gives a course of lectures in the year, and there is an examination held at the termination of his course, at which a large silver medal and a small silver medal, for the first and second prizes, are given to the best and second best answers in that subject.

2891. Are there any other funds which the society administered in aid of the encouragement of the fine arts?—In addition to that which might be called their own fund, they have been entrusted with the administration of a fund of 2,000 *l.*, which was bequeathed by Captain George Archibald Taylor, for the purpose of promoting art in Ireland. The executors have made that over to the society under certain conditions, which have been approved of by the Court of Chancery in conjunction with them. The Royal Dublin Society are joint trustees of the fund with the executors of the will.

2892. The proceeds of that bequest are distributed through the agency of the society?—Yes. I will hand in a circular giving an account of the Taylor prizes, and another circular showing what prizes have been offered for the next examination. (*The same were handed in.—Vide* Appendix.)

2893. Do I rightly understand you that with regard to the administration of this fund, it was done under the direction of the Court of Chancery?—Yes.

2894. They considered the Royal Dublin Society the most efficient hands by whom this fund could be expended, in accordance with the wishes of the testator?—They are joint trustees under the direction of the Court of Chancery, with the consent or at the suggestion of the executors.

2895. You,

2895. You, practically, administer it with the concurrence of the trustees?—Yes.

2896. *Chairman.*] When did the arts school come under the Department of Science and Art?—In 1854.

2897. What was the system of instruction pursued before it came under the department?—Perhaps I might say that it was taken from under the management of the society exclusively in the year 1848, when the schools of design were established. The Department was not then in existence; the Board of Trade, who preceded them, had the management of the schools at that time. They established our school of design upon a very liberal basis; in fact, they added 500*l.* a year to the usual grant of thesociety, which was 480*l.*, for the management of their own drawing school. So the grant continued, till the year 1854, nearly 1,000*l.* a year for the school. There was one master who was called the head master, and there were four masters besides. In 1854, or about that time, the Department of Science and Art came into existence, and they started on the principle of working all these schools on the self-supporting principle.

2898. With regard to the system pursued up to the year 1848, there was some difference between the instruction that was given then and the instruction given now, was there not?—The system was totally different. In the first place, the pupils were not required to pay any fees; they were eleemosynary pupils; they obtained admission upon the recommendation of any person of respectability who introduced them to the committee. They had to exhibit specimens of their work, to show that they were not mere neophytes, and they were then accordingly admitted into whatever class they wished to join, either the Figure Class, the Architectural Class, the Landscape and Ornamental Class, or the Modelling Class.

2899. The present system is elementary instruction, is it not?—Yes, it does not aim at so high a standard as the old system did.

2900. The present object is to train men to become art masters and designers for manufacturers and so on, is it not?—Yes.

2901. The object under the old system was to teach high art, painting, sculpture and architecture, and so on?—Yes, it went to that, without neglecting elementary instruction and the teaching of ornament.

2902. The original mode of art teaching at the Royal Dublin Society embraced the functions of the Royal Hibernian Academy?—Yes.

2903. At present, while the School of Art at the Royal Dublin Society fulfils the functions performed by the establishment at South Kensington, the Royal Hibernian Academy fulfils those which are performed by the Royal Academy of London?—Yes.

2903*. Besides those lectures to which you have referred on anatomy, is there any oral instruction given in the schools?—Yes, there are lectures given on geometry and perspective by the teachers in the schools.

2904. Is there any system of inspection by a rotation of visitors?—There is no fixed system; but occasionally members of the Fine Arts' Committee go in, from time to time, and see how the school is going on; but they have a very efficient system of returns by which any irregularity in attendance, and so on, is checked.

2905. From your experience, can you tell me whether there are many persons of what I may call the artizan class, who attend the Art School with a view to obtaining instruction in art, as applied to manufactures?—I have before me a return, which I will hand in, showing the attendance, the fees, and the prizes awarded at the last examination; and I find from that, that these are the numbers of the pupils on the books. Ladies' drawing class, 91; painting class, 44; gentlemens' morning drawing and architectural class, 39; gentlemens' painting class, 7; artizans' evening drawing and architectural class, 129; artizans' morning class (female), 26; artizans' morning class (male), 12 (*the Witness handed in the Return—Vide* Appendix).

2906. Sir *Edward Grogan.*] Have you heard any complaints of the masters being insufficient in number to give adequate instruction to the pupils; or have you heard any apprehension expressed that such might be the case?—Yes, before the change which has lately taken place in the school, the number of masters did not appear to be adequate; and the society decided upon running the risk of getting an additional instructor, and they got an art mistress, who has proved of very great value in the school, in addition to the head master, and the second master; and if the school progresses in the same as at present, I think we shall be able to add to it a master of modelling, so that we shall have four.

2907. You have three at present?—Yes.

2908. Are they believed to be adequate to the proper instruction of the pupils?—Yes; to the number now attending the schools.

2909. As to the erection of the National Gallery on the lawn, how did that originate?—It originated by the Act of Parliament for the establishment of the National Gallery; and with reference to that I will hand in a statement which Sir Richard Griffith, as the chairman of the building trustees of the National Gallery has drawn up, and which he has authorised me to hand in—(*the same was handed in.—Vide* Appendix.)

2910. The ground on which the National Gallery has been erected formed part of the lawn of the Royal Dublin Society?—Yes, and though several years have elapsed (six years now) the society have not been able to obtain the arrears of rent.

2911. From that statement it appears that the National Gallery took that ground from the Royal Dublin Society at 100*l.* a-year, was that arrangement reduced to writing?—No, it was a verbal agreement between Sir Richard Griffith and Dr. Waller, who was one of the secretaries of the society at the time. There is full proof of this being agreed to on the part of the Department of Science and Art, and in fact the Government. We have the following Minute of the Department: "My Lords having before them the Act 17 & 18 Vict. c. 99, and correspondence with the office of Public Works in Ireland, are willing to approve the arrangement which has been entered into between the Royal Dublin Society and the Governors of the National Gallery, for a perpetual lease of the portion of Leinster-square required for the New National Gallery and Library, at a rent of 100*l.*, provided the conditions of the instrument conveying it to the building trustees are such as meet their approval. *Norman M'Leod*, Assistant Secretary, Department of Science and Art.—They request to be furnished, without delay, with the draft of the lease."

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2912. Was the agreement in the nature of a conveyance or lease, or what was it?—A lease.

2913. Has that lease been submitted to the Art Department?—Yes.

2914. And approved of by them?—Yes.

2915. Has it been executed by the society?—It has not been executed yet.

2916. Is it engrossed and ready to be executed?—It has not been engrossed; it has been approved of by the Department of Science and Art, and by the Royal Dublin Society; and I think it has merely been postponed until the parties are in a position to make a settlement of the rent, so that the lease may be executed at the same time.

2917. You stated that this draft conveyance has been approved of by the Department. In what manner has it been approved of; have they signed it?—To the best of my belief, I saw the draft in Sir Richard Griffith's hands, with the approval of it by the Department of Science and Art.

2918. What is the date of the Minute you have just read?—November 8th, 1858.

2919. Everything that that Minute required to be done, has been done by the society, as far as they are able to do it?—Yes.

2920. You stated that the lease had not been executed owing to some delay connected with the arrears due; what is the amount of those arrears?—£. 550 now, I think.

2921. It was with regard to that 100 *l.* a-year, that the proposition to capitalize the amount at 3,000 *l.* was made?—Yes.

2922. The object to which the money so capitalized was to be applied, was distinctly stated always?—Yes.

2923. Has that object, namely, the purchase of Shelbourne Yard, been approved of by the department?—Yes, they have approved of it through their officer, Captain Donnelly, in the Report he presented to the department, which is published in the Parliamentary Papers. That Report was, in fact, the basis or foundation on which the Commission of Inquiry of 1862 arose; and then, the Commissioners as a body, approved of it. I cannot say whether the Department as a body has approved of it or not; their officer certainly did.

2924. Captain Donnelly, who investigated the whole of the operations of the society in Dublin by their directions, so far approved of the purchase of Shelbourne Yard, that he recommended the application of the 3,000 *l.* to that object?—Yes.

2925. A similar recommendation is contained in the Report of the Commissioners of 1862?—Yes.

2926. As to the professors of the Royal Dublin Society, they were formerly elected by the society at large?—And are still, as many as we have.

2927. I believe that the gentlemen so elected were, some of them, most eminent in their respective departments of science?—Yes, we had Sir Charles Giesecke, professor of mineralogy, Doctor Scouler who is known all over the world as a naturalist; we had Sir Richard Griffith, as mining engineer, we had Professor Higgins, who was well known as having been the first person, I believe, who originated the atomic theory, the basis of modern chemistry; we had Sir Robert Kane, and we have now Professor Davy.

2928. Those were all gentlemen elected by the society?—Yes.

2929. The operation of the society in the election of their professors, cannot be held to have been injurious to the advancement of science?—There could not possibly have been better selections by any body, or by any individual; another eminent professor who has of late years been elected, is Dr. Harvey, whose name is known over the world as a botanist.

2930. He is one of your professors?—He was one of our professors, elected by the society at large.

2931. Are you able, of your own knowledge, to give any instances of the successful results of the teaching of those professors in their different departments?—As to myself, I can state that many years ago I obtained the first rudiments of scientific knowledge from the teaching in the Royal Dublin Society, in chemistry, botany, physics, and natural history.

2932. Are you able to speak to the establishment of any branch of industry as the result of the teaching of those professors?—Yes; the "Mining Company of Ireland," which is the greatest mining company in Ireland, and has been the most successful one, was established in consequence of lectures given by Sir Richard Griffith; he has frequently stated that the origin of that company is due to his lectures.

2933. I need not ask you whether such an important company is not of the greatest utility to Ireland?—It is a most important mining company.

2934. The lectures we are alluding to by the several professors, were intended to be what are called popular lectures?—Yes; at least they were intended to be public lectures; and lectures of that kind must be, to a certain extent, popular lectures; because, for instance, taking physics as an experimental science, merely, you must treat it popularly.

2935. Would there be any difficulty in making those lectures more technical, if it were considered desirable?—There would not be the least difficulty in the society making them so; it depends entirely upon the professor himself. If the society wished it, and the professor were capable of doing it, there is no reason why it should not be done.

2936. You have told us of the beneficial results attending the lecture given by Sir Richard Griffith, with respect to the establishment of that mining company.

2937. Who is the professor of mineralogy?—Mr. Robert Scott.

2938. The gentleman who was examined here?—Yes

2939. What are the circumstances connected with the professorship of mineralogy?—The circumstances are these: in the year 1854, the minute of the Department of Science and Art had this passage in it:—"In consideration, however, of the advanced period of life, and of the long and able services of the present professors of chemistry and mineralogy, my Lords do not propose to ask them to undertake increased duties which they could not have contemplated in accepting their present positions; and they will, therefore, make arrangements not to interfere with their existing duties or salaries, although they may deem it requisite to appoint lecturers on chemistry and geology to the Museum of Irish Industry, for the purpose of carrying into effect the general scheme of industrial education intrusted to this Board." And then follows this passage: "There must, however, be a distinct understanding that

when

when the amount of either salary is again placed at the disposal of the society, it will in future be devoted to the furtherance of the museums, gardens, or library, and not to the remuneration of a new professor." The department have, to a certain degree, altered their decision upon that, for, at the death of Dr. Davy's father, they permitted him to be appointed as professor of agricultural chemistry, and Dr. Scouler is still professor of mineralogy, though he does not discharge the duties of professor of mineralogy.

2940. Professor Scouler is the professor referred to in that Minute of the Department of Science and Art?—Yes, of the 11th of April 1854, under which the present relations of the Museum of Irish Industry and the Royal Dublin Society are constituted.

2941. Professor Scouler has not resided for some time in Dublin, or performed the duties of the professorship?—No, in consequence of ill health. He lectured for three years in the society after that Minute. He then suffered from ill health, which prevented him from speaking in public, and the council, on being furnished with medical certificates, gave him leave of absence, and that leave of absence continued three or four years.

2942. Professor Scouler does not lecture now?—No; Mr. Scott is his *locum tenens*. When the council found that Professor Scouler was living at Glasgow, and engaged in arranging the Andersonian Museum, they thought he should be called upon to say whether he would resume his duties in the society or not; and he came to Dublin and expressed his readiness to resume his duties. However he found, after trying it, that it was impossible he could proceed, and he then conceded to the arrangement at present existing, that he should allow Mr. Scott a portion of his salary for lecturing for him.

2943. Sir *Robert Peel.*] Then he is in receipt of some salary?—He gets his full salary of 150 *l.* a-year.

2944. Though, for six years, he has been incapacitated from performing his duty?—Yes.

2945. Sir *Edward Grogan.*] He is still in receipt of the salary in consequence of that minute, but the duties are performed by Mr. Scott?—Yes.

2946. How is he paid?—By Professor Scouler.

2947. There is no additional charge on the public, or on the society?—No.

2948. Sir *Robert Peel.*] Mr. Scott must be wretchedly paid if he is paid by Professor Scouler?—Yes; he has only 50 *l.* a-year.

2949. Sir *Edward Grogan.*] Was this arrangement within Captain Donnelly's knowledge when he examined into the operations of the Society?—I think it is stated in the Report of the Commissioners.

2950. The arrangement you have just described is not a matter that has been kept secret, but is known to all the authorities?—Yes.

2951. I presume it is proposed that in the event of the vacancy occurring, alluded to in that Minute, that Mr. Scott should be installed in the office of professor?—I do not say that it is contemplated to make him individually professor, but if he continue to prove himself as capable for the office, as he has done, I am quite certain he would have the best chance of being elected.

2952. No decision has been formed at all upon the matter?—None whatever. At any moment, if Professor Scouler intimates that he will resume, Mr. Scott leaves, and Professor Scouler takes his place.

2953. Allusion has been made to a speech delivered by Professor Haughton, in 1854, in the Royal Dublin Society; were you present when that speech was delivered?—Yes.

2954. Of your own knowledge, are you able to state whether it was a political, or religious attack, on the Professors of the Museum of Irish Industry, or not?—It was not; I recollect the speech perfectly. I think the way in which it was introduced before this Committee was this: the witness, Sir Robert Kane, was asked whether, in his recollection, any attack had been made upon any professor connected with the society, on account of scientific doctrines which he had taught, illustrating it by saying that a professor might have said something about the Darwinian theory, or something of that kind, and some member of the society might get up and attack him on account of that, and as an illustration I understood him to say that a circumstance, similar to it, had occurred; and then Sir Robert Kane instanced this case of an attack being made upon some professors of the Museum of Irish Industry by Professor Haughton in the year 1854. I recollect the circumstance to which he referred. There was certainly an attack made upon some gentlemen who were not at that time, I believe, actually professors, nor had given lectures in the Museum of Irish Industry; for it was sometime subsequently to that that lectures were delivered in the museum; but there was nothing in the world sectarian, or religious, or political in the speech, from beginning to end. I might also state that Sir Robert Kane appeared to be under the impression that the society applauded it so far that they had it printed and circulated. There was no resolution whatever to print this speech of Professor Haughton, nor did the society ever print it, but they asked him to prepare a statement embodying the views he had expressed in it; in fact to have it as a sort of document for reference for the use of a deputation then going to London.

2955. *Chairman.*] The deputation going to London at that time was to oppose the Museum of Irish Industry, was it not?—It was to oppose the severance of the educational staff from the Royal Dublin Society.

2956. Have you the minutes of the proceedings of the society on the occasion referred to?—Yes (*handing the book to the Chairman*).

2957. I see in the report it is stated that as the result of the conference that took place between the deputation appointed by the society on the 9th May 1854, and the Lords of the Committee of Privy Council for Trade, the deputation have to report "that there appeared to be two points from which the Government would not recede, namely, first, the maintenance of the Museum of Irish Industry as a separate Government institution;" therefore, I presume, that one of the conditions which the deputation of the Royal Dublin Society wished to impose upon the council was that that institution should not be carried out?—That is put down there, but I was present at the deputation, and they did not urge anything that I can remember against the establishment of the Museum of Irish Industry.

2958. Why do they state specially there that the Government would not recede from that determination to maintain the Museum of Irish

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Industry as a separate Government institution?—I do not know why that was put down.

2959. Is not it clear that, unless the Government was urged to recede, the Government would not have stated that they would not recede?—It might be so, certainly.

2960. Unless there had been some pressure put upon the Government upon the part of the Royal Dublin Society to recede from their intention of continuing the Museum of Irish Industry, is not it perfectly clear that that paragraph would not have been inserted?—Why it was put there I cannot tell, but, to the best of my recollection, there was no pressure at that time; though it might have been the result of previous knowledge that the society was not disposed to look favourably upon the whole establishment. I do not think it was from anything that arose out of that deputation.

2961. Mr. *Waldron.*] The transfer of the educational functions to the Museum of Irish Industry might have been taken as setting up the Museum of Irish Industry; might it not?—Yes.

2962. In 1854, when it was established on the basis on which it is at present, there might easily have been a misunderstanding in that way, that where the society merely sought to preserve its educational staff it might have been taken to be opposing the Museum of Irish Industry?—Yes.

2963. Sir *Edward Grogan.*] The object of the deputation was to state the objections that the society entertained to the severance of its educational functions from it?—That was the object of the deputation.

2964. *Chairman.*] Does not it appear from this report, distinctly, that two matters were urged by that deputation upon the Government on the part of the society. First of all, was not it urged that the Museum of Irish Industry, as a separate Government Institution, should no longer be maintained?—No, it was not urged.

2965. Then what is the meaning of this expression, "that the deputation reports that there appeared to be two points from which the Government would not recede, namely—first, the maintenance of the Museum of Irish Industry as a separate Government institution; and, secondly, their intention of not supporting a double staff of teachers"?—They might be both explained in this way, that the Government announced their principles, and the society announced what its principles were, and so they put it that way; I think one will, to a certain degree, explain the other—for instance, no one on the part of the society, wished that an additional staff of professors should be established, any more than they urged that the Museum of Irish Industry should not be established.

2966. It seems here that the Government would not recede from those two points, namely, the maintenance of the Museum of Irish Industry, and their intention of not supporting a double staff of teachers, that was where the Government took their stand. On the other hand, the deputation took their stand on retaining the educational staff of the society?—Yes.

2967. Mr. *George.*] Were there any instructions given to the deputation that went to London on that occasion by the society?—No; no precise instructions were given to the deputation; the whole thing turned upon the loss of the educational staff.

2968. Mr. *Waldron.*] Was there a resolution appointing the deputation?—The society appointed a deputation. I do not remember the terms of it, but it was to confer with the Government on the points at issue between them; general instructions were given.

2969. Sir *Edward Grogan.*] The points at issue were what?—The main point was, taking away the educational staff from the society.

2970. In that discussion from which those instructions emanated, was there any resolution or proposal that the Society should as a body oppose the establishment of the Museum of Irish Industry?—No.

2971. They objected to being deprived of the education functions they had hitherto enjoyed?—That was the main objection.

2972. That was all?—I believe that was all.

2973. Sir *Robert Peel.*] You accompanied this deputation, did you not?—Yes.

2974. If you as assistant secretary report the result of the conference, as appears by this Minute, that the deputation have to report that the Government would not recede from the maintenance of the Museum of Irish Industry as a separate Government institution. Is it not clear that you and the other parties who accompanied you to the Government of the day, had urged that that separate Government establishment should not exist?—My recollection is, that the abolition or non-continuance of the Museum of Irish Industry as a separate Government institution was not urged.

2975. Then why is the report drawn up in those terms?—I do not know; it is some time since I have read that. I am only stating the thing to the best of my recollection; if the thing is in writing it speaks for itself.

2976. You had to draft it, I presume, as assistant secretary?—The report was drafted at the time, partly by me and partly by Dr. Playfair.

2977. You assert, from your own knowledge, that it was not the case that you went to the Government as a deputation for the purpose of urging on them the inadvisability of the maintenance of the Museum of Irish Industry, as a separate Government institution?—That is my present belief; it is ten years ago.

2978. Sir *Edward Grogan.*] Is this the state of the case, that a communication was received from Professor Playfair as secretary of the Department of Science and Art, intimating to you the intention of the Government to remove from the Royal Dublin Society the services of certain professors hitherto connected with them?—Yes.

2979. There was a meeting of the society, held to consider that communication?—Yes.

2980. The society objected to their being deprived of the functions they had hitherto performed?—Yes.

2981. And they agreed to appoint a deputation to go to London to represent their objections to such deprivation to the proper authorities here?—To the best of my recollection.

2982. You were one of that deputation?—I accompanied that deputation officially.

2983. You were present at the proceedings that took place on that occasion?—Yes.

2984. Did anything take place in the society antecedently to appointing the deputation, from which it might be inferred that your instructions were to oppose the establishment, or pray for the abolition, of the Museum of Irish Industry?—I do not recollect anything of the sort; I cannot recollect that there were any such instructions given.

2985. Have you any recollection that at the interview in question any such application was made to the authorities?—I have no recollection of it; but if the document says the contrary it speaks for itself; I cannot go behind that.

2986. Is it your opinion that when the Government expressed their determination to withdraw some of the professors of the Royal Dublin Society, and to establish a separate institution, that intention, so deliberately expressed by them, would exactly cover those two propositions?—It would cover them certainly.

2987. And you have no recollection, though present upon that occasion, of any proposition having been made by the deputation against the establishment of the Museum of Irish Industry?—I have no recollection whatever of it.

2988. It was not in your instructions to make any such proposition?—Not that I recollect. The main thing that seemed, at least in my mind, to absorb all others, was the question of the loss of the educational staff.

2989. *Chairman.*] This deputation to London was appointed at a meeting on the 9th of May 1854, was it not?—Yes.

2990. At that meeting, it was "moved by the Right Hon. Francis Blackburne, seconded by the Hon. Cavendish Butler, and resolved: That, in compliance with the desire of the Lords of the Committee of Privy Council for Trade, a deputation, consisting of the vice-presidents and secretaries, or such of them as may find it convenient to attend, be appointed to proceed to London, to be there joined by such Members of Parliament as are members of the society, to represent to the Lords of the Committee of Privy Council for Trade, the views of the society in reference to their Lordships' Minute of the 11th of April, and to report to the society the result of the interview with the least possible delay"?—Yes.

2991. There was another resolution passed that evening, "That the reply to the Minute of the Lords of the Committee of Privy Council for Trade, ordered to be forwarded at the last meeting, be now inserted on the Minutes"; that reply was dated the 4th of May 1854, was not it?—Yes.

2992. Will you read that passage from that reply (*pointing to it*)?—"It is matter of just surprise and regret to the society, that, with such Parliamentary authority of the ability and suitableness of this institution to be made a great instrument for the diffusion of practical science throughout Ireland, Government should have deemed it necessary or economical to have established, in close proximity and for nearly similar objects, such an institution as that of the Museum of Irish Industry."

2993. Sir *Edward Grogan.*] Go on?—"But more especially is it cause of astonishment that the Board of Trade should utterly ignore all such testimony, and subject the society, without complaint or investigation, to the deprivation of all their educational staff and functions, hitherto constituting the most effective means of carrying out the objects for which they were instituted.

2994. *Chairman.*] It appears from that, that the society had two grievances against the Government. One was, the establishment of the Museum of Irish Industry, and the other was, that they should seek to deprive the society of its educational staff and functions?—So it might be inferred from that, no doubt.

2995. Am I not justified in drawing the inference from that paragraph, taken in connection with the report of the conference, that a representation was made to the Government against the maintenance of the Museum of Irish Industry, in the first instance; and against the deprivation of the Royal Dublin Society of their educational staff in the second?—I think you are, from the document you have read.

2996. Mr. *George.*] Was or was not the reason of whatever discussion took place in the Royal Dublin Society about the proposition for the establishment of the Museum of Irish Industry, because it was accompanied by the removal of the educational staff of the Royal Dublin Society?—Yes, I think that was the principal grievance.

2997. If the establishment of a Museum of Irish Industry had stood alone, without being accompanied by the removal of the professors from the Royal Dublin Society, would there have been any objection made upon your part to the establishment of the Museum of Irish Industry?—I do not think the society would have gone to the length to which they did go at that time.

2998. The main objection made by the society, as I understand, was the intended removal of their staff of professors?—Yes.

2999. Mr. *Waldron.*] Will you look at Mr. Foot's evidence before the Commission of 1862; does he, in his evidence, give that passage which the Chairman has just asked you to read:—Yes.

3000. He there gives it with reference to transferring the educational staff from one institution to the other?—That paragraph which I have just read he put in evidence.

3001. Sir *Edward Grogan.*] Mr. Foot was one of the vice-presidents of the society in 1862?—Yes.

3002. Will you read the statement with which he introduces that letter?—"The society were greatly opposed to this proposition of depriving them of their educational functions, and remonstrated against the proposed change in the following terms."

3003. And then in those terms is to be found the passage you have just read?—That passage is included in the terms.

3004. You being a scientific man yourself, and having been long connected with the society, will you state what advantages you conceive arise from such functions as are administered by such a society as the Royal Dublin Society?—There are very many reasons, to my mind, why a society such as that should have the carrying out of matters such as the society has at present under its control. It induces, first, the principle of self-government; it unites all creeds and classes of people in their endeavour to promote the objects of the institution; and it also secures an incalculable amount of unpaid labour. Thus, in the arrangement and classification of the museum and of the several collections of the society, the members of the committees that have charge of those departments render very important services. I have seen individual members of the natural history committee, who have charge of the museum, giving months together of their time in aiding the director in naming and identifying the several specimens in the museum. New things are coming into the museum, in the way of donations, from all parts of the world; and it is impossible that any naturalist can be sufficiently informed upon every branch of the subject to be able to identify those specimens, and to classify them, without some assistance of that kind, unless he has a large paid staff. Many members of the committee are most distinguished naturalists. Mr. Andrews,

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the late Dr. Kinahan, and several other most distinguished naturalists, have assisted the director, and they go there for hours in the daytime, and, with the assistance of books, they identify those specimens that come in, and they are named and made ready to be put into the museum. In the same way, the curator of the botanical gardens has received similar assistance. Dr. Frazer, who is on that committee, has recently helped him in the arrangement of the part of the garden having the medicinal plants, with which he is specially acquainted. In the organisation of the exhibitions, such as the cattle shows, the members give an immense amount of their time and money; for I have heard that it costs gentlemen on that committee, who most of them reside in the country, at the rate of about 30*l.* a-year for travelling expenses to and from Dublin, and living, during the time of the shows in Dublin.

3005. Sir *Robert Peel.*] Have they stated that to you?—Yes; the chairman of the agricultural committee has stated to me that it costs him 30*l.* a-year, coming to town to attend the meetings of the committee; and several gentlemen I know live in his neighbourhood, so that they must all spend nearly a similar sum.

3006. Mr. *Waldron.*] He lives in the county Meath?—Yes; and during the time of the shows those gentlemen live in hotels, unless they have friends in town with whom they may stay In the same way, in organising an exhibition of manufactures or fine arts, the members meet, I may say, during the whole day, and they are at work even to late hours at night. The committee conducting the recent exhibition sat up to nearly 12 o'clock at night, and the organising of the exhibition has been going on, more or less, for a year. It is needless to say that the country has the advantage of all those labours.

3007. Sir *Robert Peel.*] As an exhibitional body?—Yes; from which individually they receive no personal advantage. When you consider that that work is done by persons of all creeds and classes, it is an obvious advantage that they should continue such harmonious working, and that encouragement should be extended to them in the prosecution of such work. I have some returns which I would desire to hand in. I have a statement of the annual average expenditure of the Royal Dublin Society for nine years, under different heads; then I have a return showing the allocation of the Parliamentary Grant to the departments of the society, for the year ending March 1864; the actual expenditure under the same heads, thus exhibiting how far the grant has been supplemented from the members' subscriptions, and miscellaneous receipts in the same period. I have also a statement of the sums raised by local and private subscriptions during the past nine years, and applied by the society to the buildings and works of the Museum of Natural History, the Library, the Agricultural Hall, and what, if any, specific funds have been voted by Parliament for those purposes. Also a return of the amount expended on the lawn out of the society's private funds; and then a return of the sums received for members' subscriptions and miscellaneous sources from 1st January 1800, to 31st March 1864, inclusive. (*The Returns were handed in. Vide* Appendix).

3008. Mr. *George.*] You mentioned a minute of Dr. Playfair in the year 1854, what did that direct, with reference to Professor Scouler; did it superannuate him in 1854, or did it merely limit him to the performance of his then existing duties, and declare that no additional duty should be put upon him?—That he should continue his present duties, without any increase to them; and that his salary should be continued at the same rate.

3009. The minute of 1854 did not, from its date, superannuate Dr. Scouler?—Certainly not.

3010. How long did he continue to discharge the ordinary duties of his professorship, after 1854?—He lectured in 1854, 1855, and 1856.

3011. He continued all the ordinary duties of his professorship from the date of Dr. Playfair's Minute in 1854 to 1856?—Yes.

3012. Then his health broke down?—Yes.

3013. It was upon that occasion that the arrangement was entered into, allowing him to go abroad, and to substitute Mr. Scott?—Yes; leave of absence was then given him. Mr. Scott's appointment was some years subsequently.

3014. That is quite plain, that Dr. Playfair's Minute did not superannuate Dr. Scouler, and that he continued for two or three years to discharge the ordinary duties of his professorship?—Yes.

3015. And that he then, from ill-health, was allowed to go abroad, and to make an arrangement with Mr. Scott to act as his deputy?—Yes.

3016. Professor Scott is, I believe, son of the late Mr. James Scott, the Queen's counsel?—I believe that he is; I do not know it for a fact.

3017. Mr. *Waldron.*] Have you seen the list of members of the society for 1863?—Yes.

3018. It consists of about 1,200 members?—Yes; something under 1,200.

3019. Have you seen an analysis of that list?—Yes; I have.

3020. Does it appear that there are 842 life members?—Yes.

3021. Each of whom has paid twenty guineas?—Yes.

3022. That would represent, would it not, about 17,600*l.* and odd?—Yes; that is of those living.

3023. The only privilege of any importance left to the life members now, is the privilege of borrowing books out of the library?—Yes.

3024. Would it not appear to be a breach of faith to the gentlemen who have subscribed so large a sum as that, to withdraw that privilege now?—Yes; I think it would.

3025. Have you seen an analysis of the number of Catholics in the society?—Yes.

3026. Does it appear that of life members there are about 76 Roman Catholics, and that there are about 25 as to whose religion there is some question?—Yes.

3027. Amongst the annual members, does it appear that there are 33 Catholics?—At least that.

3028. And there are 13 as to whom you are not certain?—Yes.

3029. You mentioned that a committee of 11 was appointed by the society at one time, for the purpose of organising the exhibition of manufactures?—Yes.

3030. Six of those were Protestants, and five you knew to be Catholics?—Yes.

3031. If the equitable proportion had been carried out, one of the 11, probably, would have been a Roman Catholic, and the rest Protestants?—Yes.

3032. That does not show that there is this exclusive and sectarian feeling we have heard so much about?—No.

3033. Was

3033. Was not a dignitary of the Established Church, either the proposer or the seconder of the Catholic Bishop of Dublin, Dr. Murray, when he was proposed as a member?—Dr. Sandys, the Bishop of Cashel, I think, proposed or seconded Dr. Murray; I forget which.

3034. Do you know that on the occasion of Dr. Murray's being proposed for election, there was a majority of those present in favour of him?—Yes; I believe there was a majority of 14, or thereabouts.

3035. Have you ever heard that after he was declared not elected, some of the influential members of the society asked him to allow himself to be put up again, and they would make it a point to secure such an attendance as would make sure of his election?—Yes, I have heard that stated.

3036. Have you heard it stated that the clique who procured his non-election were composed of the extremes of the old corporation?—I have heard that they were persons of extreme views.

3037. Do you remember the time that Sir Robert Kane was elected professor of natural philosophy to the society?—I recollect seeing an entry of it in the minutes; I was not a member at the time.

3038. Do you know, from the entries in the minutes, that there were four candidates?—Yes.

3039. Three of them being Protestants, and Sir Robert Kane being a Catholic?—Yes.

3040. Was not one of his opponents a very distinguished person, Mr. Stephens?—Yes.

3041. Notwithstanding all that, Sir Robert Kane was, on his merits, elected?—Yes. All the candidates gave, as was the practice then, a public lecture, or two or three lectures, so as to test their fitness. I believe it was after the delivery of a lecture that Sir Robert Kane was chosen by a very large majority.

3042. When he was appointed director of the Museum of Irish Industry, did he think proper to resign his appointment in the society?—Yes, about that time.

3043. Did the society take any action upon that?—Yes; they passed a resolution requesting him to re-consider his resignation, and to withdraw it, or to delay it; I am not sure whether it was to delay it, or to withdraw it altogether. That was when he was made the director of the Museum af Irish Industry.

3044. He declined, did he not, to continue to act as professor?—No; I think that he remained a year or so.

3045. When he did leave did the society recognise his past services in any way; did they elect him an honorary member?—They elected him previously to that, an honorary member; they also brought his name very prominently forward before the Lord Lieutenant, at an evening meeting. Mr. Foot, who at the time was one of the secretaries, in a speech on that occasion paid a high compliment to Dr. Kane, which was no more than he deserved, enumerating his services in science, and the result was, that Dr. Kane was directed to kneel at the foot of the chair, and receive the honour of knighthood.

3046. Mr. *George.*] In the room of the Royal Dublin Society?—Yes.

3047. Mr. *Waldron.*] Immediately after the speech of Mr. Foot, who was honorary secretary at the time, speaking of his services in science?—Yes.

3048. In answer to Question 462 and following questions, it was sought to be shown that no Catholic clergyman had been a member of the society; and that an opinion prevailed that there was no use in their trying to become members, as they would not be elected; did you hear that evidence?—Yes.

3049. Major O'Reilly asked, at 465, "Was a Roman Catholic clergyman ever excluded? There was a case of that kind;" is that true?—Yes, Dr. Murray; I know of no other.

3050. Was a Catholic priest ever an officer of the society?—Yes, the Rev. Dr. Lanagan, many years ago, was librarian. He was first assistant librarian; and afterwards he was made sole librarian. At that time there was an officer called corrector of the press. The society published surveys at that time, and they required some one to look after their publication, and he had that duty as well as that of librarian.

3051. The society had not the power to pension any of its officers, had it?—No.

3052. Did they do something exceptional to provide for Dr. Lanagan when he fell into bad health?—I have heard that they continued him as corrector of the press, with a salary, and elected a new librarian. At that time the corrections of the press, I believe, had fallen off almost entirely.

3053. From the time when he became unequal to the duties of librarian, till 1828, when he died, he was in the receipt of that *quasi* pension?—Yes.

3054. With regard to the late librarian, Mr. Patten, do you know anything of his political opinions and associations?—No; I cannot say that I know much of them; I never spoke to him upon the subject at all.

3055. Did you ever hear that he was the brother-in-law of the Emmetts, who figured in Ireland some time ago?—I think so.

3056. Was it supposed that he sympathised with them?—I do not know.

3057. With respect to the election of the council, you mentioned that any member of the society could propose a person to be appointed on the council?—Yes.

3058. And the list is made out alphabetically?—Yes.

3059. No prominence is given to one person over another?—None whatever.

3060. Have you seen the report of the Public Schools Commissioners?—Yes.

3061. Will you read their recommendations about the governing body?—This is with respect to the governing body of a great public school: "Such a body should be permanent in itself, being the guardian and trusteee of the permanent interests of the school; though not unduly large, it should be protected by its numbers, and by the position and character of its individual members, from the domination of personal or local interests, of personal or professional influences or prejudices; and we should wish to see it include men conversant with the world, with the requirements of active life, and with the progress of literature and science."

3062. Do you think such a body as is there described is to be found in the Royal Dublin Society for the purpose of directing education?—No doubt of it; it is a very correct description of the council as it is as present, "including men conversant with the world, with the requirements of active life, and with the progress of literature and science."

3063. Will you turn to page 6; one of the recommendations there is, that they are to have the

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the power of appointing and dismissing the head master?—Yes; that they should have the power of the appointment and dismissal of the head master.

3064. It also recommends, does it not, a school council?—"We shall recommend, therefore, as a general rule, that in every school the assistants, or a certain number of them, should meet on fixed days, with the title of a 'school council.'"

3065. That would go to show that those Commissioners were not of opinion that this individual responsibility, about which we have heard so much, is really of much importance?—It would appear from this that a superintending council is what they aim at.

3066. *Chairman.*] Has that reference to any institution supported by the taxpayers of the country?—The commission was to inquire into the revenues and management of certain colleges and schools, those being colleges and schools supported by public endowments of some kind.

3067. Is not the great object, as far as possible, to endeavour to get some responsibility?—Yes.

3068. Have you read the evidence taken before the Public School Commissioners?—Not the evidence.

3069. You have only read the report?—Part of the report.

3070. Are you aware that one of the reasons for that recommendation which you have read is this, that they found that the whole system of our public schools has been so lax, there being nobody who could be held responsible for their administration, that they are endeavouring to establish, as far as they can establish, a governing body, which must be responsible, and therefore naturally they take the best they can get?—Yes.

3071. But that does not imply that those Commissioners would be of opinion that a fluctuating body of gentlemen should be entrusted with educational functions in preference to persons appointed directly by the Government, and responsible to it?—I am not sufficiently acquainted with the matter to be able to give an answer.

3072. Mr. *Waldron.*] A question was put as to loss of books in the library of the Royal Dublin Society; I believe you are a graduate of Trinity College?—Yes.

3073. Have you ever heard that books are lost from their library, though it is not a lending library?—Yes, there have been serious losses from time to time: I know that books have been very much mutilated, and that books have been stolen also: I know that persons have been successfully prosecuted for the offence.

3074. You spoke of five acres outside the Botanical Gardens, which must ultimately fall into the society, and you said that it was desirable that that ground should be secured to the society?—I think the council are of opinion that it is better to wait until it falls into the hands of the society in the usual way, than to take steps to gain possession of it at once. It would involve a considerable expense in maintaining the ground and putting it in order; it must be done ultimately.

3075. Have any proposals been made by the tenant in occupation for the surrender of his interest?—Yes. Captain Lindsay, some years ago, agreed to give the society a certain sum, provided they would take this land off his hands; I think it was 500*l.*; but the society were quite unprepared to expend the annual outlay that it would involve.

3076. It would be necessary to wall it?—Yes.

3077. The grant at present would not enable them to do that?—No.

3078. With respect to the allegation which has been made, that in the Royal Dublin Society the mercantile classes are overpowered by other classes, will you look, for instance, at the committee of manufactures; is the chairman of that committee an ironfounder?—Yes, he was an ironfounder. Mr. Purdon is connected with the "Farmer's Gazette"; Dr. Sayers is a man of general knowledge; Mr. Bagot is a merchant; Mr. Austin is a manufacturer.

3079. Does it appear from that that the middle class is fairly represented upon it?—Yes; I should say that the majority on that committee are of the middle class.

3080. Again, with regard to the committee of agriculture, are not nearly all the gentlemen on that large graziers or gentlemen connected with agriculture?—They are all agriculturists themselves, with the exception, I believe, of Dr. Collins; he is not now, but was so for many years.

3081. The committee of chemistry is composed almost exclusively of medical gentlemen, who naturally must be supposed to know more than others upon that subject?—Yes.

3082. In fact, all the committees, I take it, are fairly chosen with regard to the claims of the middle classes?—Yes; I think they are chosen entirely on account of their fitness to serve on any particular committee.

3083. Is there not a book kept in the society, in which persons willing to serve upon the committee write their names?—Yes.

3084. Have you known any instances of persons who have so expressed their willingnes to serve being passed over on account of political or religious considerations?—Never.

3085. Then persons fit to serve, who have not been asked to serve, may be presumed not to have put their names upon that book, may they?—Yes.

3086. We heard a good deal of the one-sidedness of the Commission of 1862; are you aware that two gentlemen who gave evidence before that Commission, Mr. Senior and Mr. Sanders, expressed their opinion strongly in favour of amalgamation?—Yes.

3087. Mr. Foot, formerly honorary secretary, also, I believe, expressed his opinion strongly in favour of amalgamation?—Yes.

3088. As to all the others who were examined, I believe nine expressed no opinion whatever, viz., Dr. Carte, Mr. Andrews, Mr. White, Mr. Simon Foot, Mr. D'Olier, Mr. Moore, Dr. Collins, Dr. Sidney, and Mr. Andrew Corrigan?—I believe that is the case.

3089. As to Lord Talbot de Malahide and Professor Haughton; Professor Haughton gave his opinion on the hypothesis that the Government would come to the decision to amalgamate the two institutions; he says, "If this consolidation takes place;" Lord Talbot de Malahide says, "If an amalgamation takes place;" and you yourself say, "If determined upon;" so that the statement that this was a one-sided and prejudiced collection of evidence would appear not to be well founded?—Yes, I should say that, as to the amalgamation question, it was just as you

you have stated, that a certain number recommended it positively, others spoke of it hypothetically, and others not at all.

3090. *Chairman.*] You read, a few minutes ago, a passage from the Report of the Public Schools Commissioners; are you aware that that paragraph has reference to the character of the governing bodies of the great public schools of England?—I believe so.

3091. The object of that Commission, I think, has been to inquire into the course of public education in England; and the report recommends an extension of education in the way of modern languages and science, does it not?—So I have heard; I have not read any of the report except those passages which I have just read. I have not read the report through.

3092. Is not the object of this paragraph to recommend the introduction into the governing body of public schools, of "men conversant with the world, with the requirements of active life, and with the progress of literature and science"?—So I understand.

3093. Inasmuch as it appears from the report very great complaints have existed with regard to the stagnation of our public system of teaching?—Yes.

3094. Are you aware that in the very next passage to that which you have read, it is recommended that a certain proportion of the governing body should be nominated by the Crown?—I did not read that.

3095. Will you read that passage?—"In the case of some of the schools, we shall recommend that a certain proportion of the governing body should be nominated by the Crown. Nothing, we believe, would more assist to secure to these bodies the character which we desire to see impressed on them, than the introduction, within certain very moderate limits, of a mode of appointment absolutely removed above the influences against which we wish to guard, and such as to add distinction to an office in itself highly honourable."

3096. Therefore it was not only considered important that the governing body in the case of these public schools should have some private gentlemen added to it, but that there should be other persons nominated by the Crown?—Yes, clearly.

3097. Mr. *Waldron.*] That last paragraph you read recommends that in "some" schools a part of the governing body should be appointed by the Crown?—Yes.

3098. But the previous paragraph recommends that, in the case of all schools, the governing body should be constituted as is suggested?—It says, "the governing body of a great public school." With respect to the proposition of a certain proportion being nominated by the Crown, it was suggested by the Royal Dublin Society that some of the council should be nominated by the Crown. The Department of Science and Art were sounded on the subject, who thought it better to leave it entirely to the action of the society themselves. There was no objection on the part of the society to such a proposition.

3099. *Chairman.*] I think you stated that there was no library in Dublin which might be considered a public library, with the exception of the library of the Royal Dublin Society?—Yes.

3100. All the rest are limited, as regards the terms of admission?—Yes; Archbishop Marsh's may be considered a public library, only the nature of the books renders it not a useful one, except to a particular class of readers.

3101. In the library of the Royal Dublin Society, which is the only public library in Dublin, and which is so largely subsidised by the Government, is it true that books very often cannot be had by readers for a very considerable period after they are catalogued?—I should fancy it is the case.

3102. Have you ever heard of instances of visitors coming from the country for the express purpose almost of consulting a particular scientific book in the society's library, and being unable to obtain it?—I have never heard of such a case.

3103. Mr. *George.*] All new books must remain for a month in the conversation room before being lent out at all?—Yes; they are put into the conversation room, to which members only have access.

3104. *Chairman.*] The public, for that first month, are interdicted from access to them?—Yes.

3105. I think you have stated that the library at Cambridge is conducted upon the same lending principle as the library in Dublin?—So I have heard a graduate of Cambridge state, in this room.

3106. The case of the Cambridge Library has been quoted as an example analogous to that of the Library of the Royal Dublin Society; is it not the case that the position of the library at Cambridge and the position of the library at Dublin, of the Royal Dublin Society, materially differ in this respect; that the Cambridge Library is for the benefit of all the Cambridge under graduates and graduates, persons who pay for the support of that library; whereas the Royal Dublin Society's Library is chiefly, I may say almost entirely, supported by money paid by the general taxpayers of the country?—Yes.

3107. There is a most material difference between the two?—There is that difference.

3108. What is the nature of the Advocates' Library at Edinburgh?—From what I have been able to ascertain, it is a library somewhat like the Trinity College Library; it has the right to have a copy of every book that is published, and it is managed by the Faculty of Advocates of Edinburgh (a body similar to the benchers in this country), who themselves have the privilege of borrowing books from it.

3109. Is it thrown open to the public?—Yes.

3110. I think one of the grounds upon which you advocate this power of taking out books from the library is, that it is a great advantage to the families of members?—Yes.

3111. Therefore not only are the members but their families benefited by the reading of those books?—Yes.

3112. I think you also stated that the library of the society practically performs the same functions in Ireland as the British Museum Library does in this country, as far as its means go; the libraries in the two places not being identical in point of extent?—Yes, I think I stated that.

3113. Do not you draw a very marked distinction between a library where books are always accessible to the public, except at the period when they are occupied by a reader, and a public library which is paid for by the public where the books are not accessible for a very considerable period after they come into the library; and where they are available not only to the members

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of a private institution, but also to their families; is not there a considerable difference between the two institutions?—There is a difference certainly, viewing it in that way; but the difference, I take it, is not so great between the two cases. A reader wanting a book may find equal difficulty in getting access to it in the two institutions. In the British Museum books are monopolised by readers for days and weeks together, but they are not lent outside the walls.

3114. How long may a person keep a book from the library of the Royal Dublin Society?—A fortnight. He must return it then, if it has been asked for by anybody else.

3115. Have you made any inquiries at the British Museum as to whether any one reader, practically, retains the same book for a whole fortnight?—Yes. I have inquired at the British Museum, and they tell me that sometimes books are kept for four months, from one period of cleaning to another; when the time for cleaning arrives the books are reinstated.

3116. During the whole of that period no person can have access to that book?—I understand so from inquiry.

3117. Do you mean that in case a person actually did not have that book in his own hand, and was reading it and studying from it, another person could not have access to it?—I understand so, that books while in a reader's possession are understood to be in his use, and therefore every other reader is excluded from its use; I heard that there was a sort of closet in which they are reserved.

3118. In the Royal Dublin Society, how do you calculate the attendance of persons upon your lectures; is it by multiplying the number of persons present by the number of lectures?—Yes, that is the way; you take the average.

3119. Was there any complaint made by the Department of Science and Art as to the mode in which the attendance on your lectures was calculated?—Yes, complaints were made two or three times. We did not appear to understand exactly what they required, so we continued the practice; for there were no means of mixing up averages, as they wished, with the actual number. For instance, if we added the average number of persons attending the lectures to the entire number who attended the Botanic Gardens in the year, an average return of the number of visitors to the whole could not be taken; in fact, you could not add average numbers and total numbers together.

3120. Year after year this complaint was reiterated by the department, was it not?—For two or three years it was.

3121. Do they complain now, or are they satisfied?—We have heard nothing about it lately.

3122. With regard to the lectures given in the Royal Dublin Society's theatre, complaints have been made with regard to the reserved seats; it is stated, in a letter which I have received, that the reserved seats are often half empty, and are only filled by children; while many of the real students have to remain behind the railing which separates them from the table covered with the specimens; and that they cannot, after the lecture, enjoy the privilege of the explanations of the professor, who invariably remains a little while for that purpose; do you think that statement well grounded?—It is to a certain extent. There are reserved seats. I do not know whether the public are prevented from going down to the table afterwards; but I have myself sometimes known the persons occupying those reserved seats, children and ladies mostly, to interfere very much with the apparatus. Sometimes by crossing through the apparatus, and when there have been electric wires, for instance, round the table, they have become disarranged in consequence.

3123. Would you think it advisable hereafter, in any lectures which may be continued in the Royal Dublin Society, that the students should have certain seats reserved for them in front?—We do reserve a set of seats for the students, immediately behind the reserved seats for members, a short distance from the table, as good seats as those reserved for the members. They are cushioned; they are in the fifth row; there are four rows between that row and the table, and it appears to me that the students can obtain the most perfect advantage of the lectures by sitting there; but I am sure, if it were thought that there was any ground for any such objection, the society would remove it at once.

3124. With regard to honorary members, do you, in electing an honorary member, generally apply to him beforehand to know whether he wishes to be made an honorary member?—No, not officially; but it is generally discovered through some of his friends. We have not invariably done so, because the honorary membership is generally put upon a person without his seeking it, or giving him the least idea that such a step is about to be taken.

3125. I presume that you would not designate persons who were honorary members of the Royal Dublin Society, as persons who were connected with it by their own wish and desire?—Certainly not.

3126. If I asked whether certain men eminent in science were members of the Royal Dublin Society, and it was replied to me that they were honorary members, that answer would not meet my question, would it?—No; they have no functions at all; they have the same privileges as the members of the Royal Dublin Society, but they have no right of governing.

3127. It might be something more than that; it might be that the Royal Dublin Society were anxious to have upon their rolls the names of very eminent men, and that those eminent men had never acquiesced in being so enrolled?—It certainly might be, but I never heard of its being the case.

3128. Mr. *Lefroy.*] Is not the intimation generally given to those honorary members, that they are going to be made honorary members, and do not they express gratification after their appointment?—Yes; every one, after I have notified to him his election, has replied in very grateful terms indeed.

3129. *Chairman.*] They have always replied to it?—Yes; at least to me.

3130. With regard to the evening scientific meetings; are those scientific meetings attended, generally, by men of high reputation in science?—Occasionally they are.

3131. Generally?—I believe not so generally; occasionally, when any special subject is to be brought forward that interests them, they come there.

3132. Are papers published of those proceedings?—Yes; we publish the chief papers in the journal.

3133. Are these subjects taken up at those evening

evening meetings; geology?—Some of them are geological.

3134. Natural history?—Yes.

3135. Statistics?—No.

3136. Antiquities?—No, not antiquities. The subjects are mostly what might be said to be subjects bearing upon some practical matter; practical science and art, natural history and botany.

3137. Are there independent societies in Dublin which take in hand most of the subjects dealt with at those meetings?—Some of the subjects discussed at our society are embraced by no other society in Dublin; for instance, a most valuable paper was read at the last meeting by Mr. Andrews on the fisheries of Ireland, with reference chiefly to the question of trawling, and there is no other society to which that subject would properly belong.

3138. Did these evening meetings chiefly originate from the Report of the Committee of the House of Commons of 1836?—No; they had been going on long before that.

3139. They were monthly meetings before that, were they not?—Yes; and they are now monthly meetings.

3140. Mr. *Lefroy.*] As to the provincial lectures, are you acquainted with the circumstances attending the establishment of the system of provincial lectures?—Yes; but only from what I see in the printed Minutes.

3141. In what year were they first given?—They were first given in the year 1839.

3142 How long was that after the Parliamentary Report?—Three years.

3143. What is the nature of the communication that the Government made upon the subject of the lectures at that time?—A communication was received from the Government, dated the 6th of April 1842, written by the Chief Secretary for Ireland at the time, Mr. Lucas, to this effect: "Gentlemen, I am directed by the Lords Justices to transmit herewith, for the information of the Royal Dublin Society, a copy of the communication which has been received from the Treasury, stating that their Lordships have directed a sum of 300 *l.* to be included in the estimate to be submitted to Parliament for the society, to be applied towards continuing to some of the provincial towns in Ireland gratuitous lectures on literary and scientific subjects." And then in that is enclosed the following communication from Sir Charles Trevelyan, the Secretary to the Treasury: "I am commanded by the Lords Commissioners of Her Majesty's Treasury to acquaint you, for the information of the Lord Lieutenant of Ireland, that my Lords have directed a sum of 300 *l.* to be included in the estimate to be submitted to Parliament, for the Royal Dublin Society, to be applied towards continuing to some of the provincial towns in Ireland gratuitous lectures on literary and scientific subjects, it appearing that the sums issued in each of the last three years to that society, in furtherance of this object, have been productive of beneficial effects, and have given satisfaction so far as they have extended; and I am to request that you will move his Excellency to give directions that this sum is to be applied only in aid of the contributions which may be raised in the several provincial towns for this object, and it will be for his Excellency to decide as to the mode in which it may be best applied to the several towns, with a view to secure the greatest amount of scientific instruction and improvement."

3144. Did the society then proceed to carry out the recommendations that were given on the subject of those lectures?—Yes; it was ordered on the 7th of April 1842, "that a letter be written to Lord Elliot, acquainting his Lordship that the Council, having taken into consideration his Lordship's letter of 25th March, will not fail to give efficiency, as far as in their power, to the intentions of the Chancellor of the Exchequer in furnishing lectures to provincial towns in cases wherein applications shall be made for the same, and contributions towards the expense furnished by such towns.

3145. They did not manifest any hesitation, or raise any difficulty in carrying out those lectures afterwards?—No. It appears by one of the letters here that they asked whether the Government wished to indicate any particular way in which it should be carried out; and the reply of the Government was this: "The fund is placed at the disposal of the Royal Dublin Society, as the most prominent and distinguished body of scientific and practical gentlemen of the country; and his Excellency has most perfect reliance upon their judgment and discretion in the distribution, and would feel very reluctant to hamper them with too much restriction."

3146. Mr. *George.*] At present four of the committee of lectures are selected by the Government, and four by the society?—Yes.

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William K. Sullivan, Ph. D., M.R.I.A., called in; and Examined.

3147. *Chairman.*] You have long been connected with the Museum of Irish Industry?—I may say since its commencement. I was appointed Assistant Chemist in 1846; but I had been connected with it nine months previously.

3148. In what capacity?—Nominally as the private assistant of Dr. Kane, but really doing the work of the geological survey.

3149. You were the assistant chemist originally?—Yes; assistant chemist was the official designation; but, in reality, I had to perform all the chemical work.

3150. What were your duties as assistant chemist?—As assistant chemist, and ultimately when I received the title of chemist, my duties were threefold. I had, first, to do any work referred to me by the director and officers of the geological survey: secondly, to carry out any investigations that the Government should recommend the director of the museum to undertake; and any chemical work referred from public Boards, such as the Poor-law Board and others; and, thirdly, we being engaged in the preparation of agrological maps, my duty as chemist was to carry out the chemical portions of that work.

3151. An agrological map, being a map describing the nature of soils?—Yes; a map describing the nature of soils and superficial deposits.

3152. Are the duties of chemist the same now as they were when you first held the office?—No, I think they are perfectly distinct.

3153. In what way?—At present, the chemist is in reality professor of analytical chemistry. It was no part of my official duty, as chemist, to teach chemistry at all. I, and the assistant chemist, were allowed to have pupils in the laboratory,

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ratory, but that was a secondary function. We had always some pupils, but it was on the understanding that our teaching duties should not interfere with the regular official work.

3154. Did you consider yourself, when you were assistant chemist, as in any way connected with the geological survey?—Not officially; but I considered that it was a very important portion of my duties to aid the officers of the survey.

3155. In what manner did they require chemical assistance?—In many ways. In the first place, the officers of that department brought specimens of minerals to be determined or asked for verbal explanations on chemical matters, and sometimes complete analyses of rocks and ores had to be made.

3156. The officers of the geological survey did, I presume, avail themselves of your assistance?—In my opinion they did to a very great extent.

3157. I think you said, in answer to a question I put to you, whether the duties of chemist were the same now as when you held that office, that the office of chemist has now become instructional; were the students allowed to take advantage of the laboratory before the establishment of the present system of lectures?—Yes. That is to say, we were allowed to have pupils, provided the teaching of them did not interfere with our official duties.

3158. What provision was made for the teaching of practical chemistry when the present arrangement of lectures was established?—There was no official provision made in 1854; but, wishing to carry out as far as possible the provisional arrangement, because all our arrangements with regard to lectures at the outset were provisional, I was anxious to see how far the laboratory could be of assistance to the artisan classes in Dublin; and I voluntarily established, in 1854, an evening class for the instruction of artisans in practical chemistry, which is now in operation in the museum. The first class of that kind that was formed there was that one.

3159. As chemist, you took part in the teaching of practical chemistry?—Yes.

3160. Had you an assistant chemist at that time?—Yes, there was an assistant chemist then, Mr. Gages, but I considered that the duty of teaching was so little connected with the office of chemist, that I did not ask the assistant chemist to take any part in the evening teaching, because I did not wish to impose upon him any of the duties which I had taken upon myself by my voluntary act.

3161. Did he take any part himself in those classes?—No, not in the evening classes; he always did in the day classes, because it was an arrangement between us that he should do so; we dividing the fees.

3162. Do you consider it of much importance that there should be a good laboratory for teaching practical chemistry in connection with the museum?—Undoubtedly, or I would not have attempted to establish the classes now in operation; but, that laboratory instruction ought to be strictly confined to the objects for which the museum was established.

3163. Will you explain that answer a little more fully?—The number of persons who require a knowledge of chemistry, as their chief special knowledge must necessarily be limited, and, if you confined your instruction to that class, you would not have a large number. If you admit apothecaries' apprentices and medical students, of course you will enlarge its basis very much; but, in my opinion, that is passing beyond the legitimate functions of the institution.

3164. Have many medical students availed themselves of the teaching of the laboratory?—Several, I am told, availed themselves of it; that is not the fault of the persons who are teaching. If I were conducting the practical teaching, I should be glad to extend the number as far as possible, but I would not so extend it as to have the laboratory "recognised" (as it is stated by the syllabus) "by the Apothecaries' Hall of Ireland," the result of which is that it interferes necessarily with the medical schools, and I think it helps to deteriorate the system of medical education.

3165. How is it that the medical students resort to the laboratory of the Museum of Irish Industry, considering that they have their own schools in which they can obtain the same instruction?—One of the reasons is that a large number of medical students are apothecaries' apprentices, and, as the apothecaries are desirous of getting as much work out of them as possible during the day, they send them to any place where they will get evening instruction, and where they can save some money in addition.

3166. Of course, you would not prevent medical students from coming and availing themselves of the laboratory instruction at the Museum of Irish Industry?—Quite the contrary. I say, if I were at the head of the class, I would endeavour to extend it as much as possible; but I draw a distinction between doing that and making the recognition of the practical chemical course by the Apothecaries' Hall of Ireland a distinct feature, as this programme does of the educational arrangements of the Museum of Irish Industry.

3167. You are of opinion that this teaching interferes prejudicially with the medical teaching?—I have heard it condemned very much.

3168. Upon what ground?—Upon the ground that it interferes with the proper studies of the medical students, by preventing them attending other lectures, and that it enables the apothecaries to get the largest possible amount of mechanical work in their shops from the medical students, thereby interfering with their proper course of studies.

3169. You think that the large attendance of those medical students at the laboratory of the Museum of Irish Industry is caused rather by the apothecaries finding it an advantage to themselves to send their apprentices there, than by any particular advantages offered by the Museum of Irish Industry over the other schools?—Yes, I think so.

3170. You are professor of chemistry?—Yes.

3171. What are your duties as professor?—I may observe that all our arrangements have been provisional from the establishment of the lectures in 1854. My duties at present are to deliver three courses; one public one, in the Museum of Irish Industry, in the evening; one public one, in the Royal Dublin Society, in the afternoon; and a course, which we call the systematic course, delivered in the Museum of Irish Industry.

3172. Is the free course of lectures delivered in the theatre of the Royal Dublin Society connected with the paid or systematic course that is delivered at the Museum of Irish Industry?—When this programme was first brought out, as far as my own lectures were concerned, it was. The arrangement

rangement of connecting the course delivered in the afternoon at the Royal Dublin Society with the systematic course existed, I think, not only in 1856, but also in 1857. The students, however, complained, and I believe very justly, that the lectures at the Royal Dublin Society were wholly useless to them; that they were removed so far from the specimens upon the table, that they could see the experiments so imperfectly, and that the arrangements were so defective for hanging the diagrams, and that, in fact, the general arrangements of the place were so imperfect, that they could not answer any question whatever at the examinations upon the lectures delivered at the Royal Dublin Society. In 1858, in a letter I wrote to the director, Sir Robert Kane, giving an account of my classes during the year, I think I stated to him that the students made the complaint I have now mentioned, and from that period I have separated the courses completely; they have now no connection with one another. I therefore repeat at the Museum of Irish Industry most of the experiments I give at the Royal Dublin Society, or I make the Royal Dublin Society course a totally different one,—a more popular course.

3173. Did you hear me read to the last witness a passage from a letter which I have received? —I did.

3174. Do you agree in the opinion of the lady student who wrote that letter, that, in consequence of the seats nearest to the lecturer being reserved for the use of the members, there is a difficulty in the students availing themselves of the instruction of the lecturer?—I have always held that opinion very strongly. As a professor, I believe it would be perfectly useless to give a course of really systematic instruction in the lecture-room of the Royal Dublin Society, so long as that arrangement is allowed to exist.

3175. What arrangement is made with respect to the apparatus belonging to each institution, which you employ at your lectures?—I employ none of the apparatus belonging to the Royal Dublin Society; I am obliged to carry to the Royal Dublin Society every bit of apparatus I use there. I am obliged to get a man out of the street to carry my apparatus in a basket. After all my trouble in setting up my apparatus, bending glass tubes, and so on, I am placed in the city of Dublin in the same position as I would be in the town of Sligo or Galway; I am obliged to carry everything, even to the very burner I use for producing heat.

3176. The apparatus which you require in lecturing upon chemistry is peculiarly delicate and fragile, is it not?—Yes; the annual breakage is something enormous; but it is not the breakage I mind so much as the labour it entails upon me; for, having no assistant, I am obliged to re-make the whole of it myself.

3177. Why is that the case; have not they sufficient apparatus at the Royal Dublin Society to illustrate your lectures?—I did not see any suitable; the use of the apparatus which is there has never been offered to me; at all events, I found some difficulties about it. When I asked for anything, I found it was not forthcoming very readily, and I am not surprised at it, for if I were in the position of the lecturer on chemistry at the Royal Dublin Society, I would not like to have another professor coming and interfering with my apparatus.

3178. The free lectures in both institutions are managed by the Committee of Lectures, are they not?—As far as I am aware, I do not think they are; I think it shows the good sense of the Committee that they are not.

3179. That is, they do not interfere in any way?—They never interfere with us; I sent them, the first year, I think, a syllabus. I never had any official communication with them that I recollect after that time. We, that is, the director and the professors, annually make up a programme of all the educational arrangements for the year. I do not see why a number of judges, barristers, and other persons engaged during the greater portion of the day in their official duties, should undertake the details of the management of scientific instruction. We might as well, as a body of professors, regulate the hours of sitting of the courts.

3180. Practically speaking, you yourselves as professors, meet together and draw up a syllabus, and determine what lectures shall be given?—Yes.

3181. And you are unfettered altogether by the Committee of Lectures?—Quite so.

3182. I presume from what you have just stated, you consider that the Committee of Lectures are of no very great utility as regards the lectures in the City of Dublin?—I have not seen their utility.

3183. Their chief utility is that they do not interfere?—That is my opinion.

3184. What classes of persons form the audiences at the different courses which you have described?—At the Royal Dublin Society they are generally members, or persons belonging to their families (the members themselves are not very numerous); generally there are a good many ladies, and there are young men, some of them students of colleges, and children—that is the inner circle; the outer circle consists generally of clergymen, clerks in banks and public offices; occasionally, but not very often, I have seen shopkeepers whose faces I have recognised, and there are also ladies who are to be governesses. The audiences at the Museum of Irish Industry, at the evening lectures (at least at mine) have been almost entirely artisans. At some of the courses that have been given, at least 70 per cent. of the audience were artisans. Chemistry not being a very popular subject for ladies, we have not very many at the day lectures (we have two or three sometimes), and we have a number of students—some medical, some belonging to the colleges, some to the public schools, and a few who are really *bonâ fide* seeking for scientific knowledge with a view to apply it to industry.

3185. For which of those classes which you have described do you consider that those lectures were most properly intended?—For the latter, and the artizan class.

3186. Do you make any difference in your mode of treating your subject at those different courses?—Not in the Museum of Irish Industry; I treat it there as I would treat it at a University; but at the Royal Dublin Society, for the reason I have stated, I have made the lectures somewhat more popular. A chemist diminishes his popular audience every time he takes a piece of chalk in his hand, and goes to the board, and if he is in the habit of doing so frequently his class dwindles away. If I wish to use any figures, or to make use of any abstract notions of any kind, I have to put them upon permanent diagrams, and hang them upon the walls for reference.

3187. Your subject is an eminently practical one,

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one, is it not?—Yes. In the evening lectures which I have given at the Museum of Irish Industry I have always treated it as such; it has been alleged that we have never given any technical lectures at the Museum of Irish Industry; that is a complete mistake. With the exception of two courses, the evening lectures that I have given at the Museum of Irish Industry have been almost entirely technical: for instance, I have given lectures on tanning, on dyeing, on the manufacture of pigments, on the manufacture of paper, on metallurgy, the dressing of ores, and so on.

3188. Chemistry, as applied to the arts?—Yes.

3189. Do you think it a very great anomaly that there should be lectures upon the same subject delivered at two distinct places, and, as it were, to a certain extent, in two distinct manners?—I do.

3190. Do you think that any professor can do justice to his subject under such an arrangement?—Certainly not.

3191. The great object you have is to make a certain number of your audience thoroughly conversant with the subject, is it not?—That is the object, of course.

3192. If you proceed by commencing with mere popular lectures in the Royal Dublin Society, and you then take up the same course at the Museum of Irish Industry, I presume, you have to commence *ab initio* for your real earnest students?—As far as experiments go (and all the lectures given by the professors of the Museum of Irish Industry are very much illustrated) we have to repeat nearly all the experiments over again at the Museum of Irish Industry; at least I have, because, for the reason I have stated, I find it perfectly useless to connect the two courses of lectures.

3193. Therefore you unequivocally condemn the present system?—Most certainly.

3194. It does not do justice to the professor, and does not do justice to the student?—No.

3195. And it is unsatisfactory to the public as far as the expenditure of money goes?—Yes.

3196. Judging from the syllabus of your course, you lecture only on pure science?—The syllabus of the course is drawn up for the purpose of being used as an index to any text-book the student may use, and to give him an outline of the whole science. That was the original object of the syllabus. It was supposed that a student should direct his attention to pure science as the real and true foundation of practical science. The amount of knowledge required for practical purposes is far greater than would be required for a University degree, for instance, and unless the science be taught in the fullest manner, in the most complete and theoretical way, it can never be of much use for practical purposes.

3197. Do you, besides teaching pure science, teach also the practical application of it?—Yes; answering for myself, whenever I find any student attending my lectures wishes for instruction in any practical application, I always devote a certain portion of time to that practical application, quite independently of the evening lectures, which have been almost entirely technical, and which were illustrated by all the specimens and models which we have in the museum.

3198. You give specific courses in chemistry as applied to industry?—Yes. Quite independent of those specific courses which are given in the evening to a class composed largely of artisans, I have in the day lectures, whenever I have found out that it would be useful, pointed out the direct applications of the science. I generally ascertained what were the objects of the students at the outset of the course, and if I found that they had no intention to take up any branches of manufacture or trade, it would obviously have been a waste of time, especially with our limited courses, for me to direct their attention to special applications which they did not want.

3199. How do you ascertain the objects of your class?—I endeavour to ascertain the purposes of each, in order to point out to him the special books he ought to read, and the particular subjects he ought to turn his attention to.

3200. Do you find that in Dublin the artisan classes pay considerable attention to those scientific courses?—Undoubtedly. They have repeatedly called upon me: in fact, the number of them calling after the lecture to ask me explanations and questions connected with the lectures that were given was so great as to cause inconvenience.

3201. There is a great desire for obtaining scientific information; is there also an aptitude for acquiring it?—I think particularly so.

3202. With regard to the collections in the museum; what is the present state of the technological collections at Stephen's Green?—Some are very complete and others are imperfect; the manner in which the museum was erected interfered greatly with the formation of any collections there. It took four or five years to complete the building, so that during that time any specimens collected were often spoilt by mortar and dust getting on them. But some of the collections are very complete; those, for instance, especially connected with pottery and with metallurgy are complete.

3203. You have specimens illustrating the whole history of pottery?—Yes; we have so complete a collection that M. Regnault, the director at Sevres, told me that he would be very glad to have a similar one.

3204. With regard to metallurgy; is that collection also a complete one?—The metallurgical collection is also very complete; but, generally speaking, all our scientific institutions, and I suppose the same applies to England, are never allowed to get into a permanent state; whenever they approach to a good system of organization, there is always some inquiry, and they get a shake, in order to prevent the professors and other officers, I suppose, from becoming barnacles upon them, so that the zeal required to form really valuable collections of this kind is chilled.

3205. Which of the technological collections are imperfect at present?—Chiefly the ones connected with textile fabrics. We once commenced making a series of models to illustrate the manufacture of textile fabrics, but we were prevented from going on with them.

3206. Why were you prevented from going on with them?—Probably on the ground I have just stated; I do not see any other. The Department of Science and Art prevented the collection of models being completed. The models constructed were only those connected with the silk industry of Dublin, the old forms of looms; the new ones were not constructed.

3207. Would those models have taken up a very large space?—Not very much, because we would not require to have models for every branch of

of industry, but only those which would be connected especially with Irish industry.

3208. Do you attach much value to a technological museum?—Very great value indeed; I do not know anything that would be of more practical benefit than the existence of a properly constructed technological museum; I can say from my connection with the institution in Stephen's Green (having formed a very large proportion of its technological collections myself, portions of them were collected by me in England and in Scotland,) the benefits derived from them have been very considerable.

3209. You consider that they have been of great value, so far as regards industrial education?—Yes.

3210. How far are those technological collections in accordance with the original intention of the foundation of the Museum of Irish Industry?—The museum having originally been formed upon the same principle as the Jermyn-street Institution; those technological collections did not enter (at least, in the full sense of the term) into that plan; but when the change was made from the Museum of Economic Geology to the Museum of Irish Industry, the whole plan was altered, and, I believe, it was the intention to carry out the technological side of the museum to its full extent.

3211. With the view of its being an instrument for industrial education?—Yes.

3212. In a technological museum, do not the specimens require to be changed very frequently?—Certainly not, if the museum be not constructed as a shop, but based upon a purely scientific classification; if so classified, they do not require to be often changed. The specimens in every museum, of course, whatever it be, whether directed to technology or natural history, or geology, will become deteriorated in the course of time, and will have to be replaced; but the amount of change that would be required in a technological museum, based upon a scientific arrangement, would be small. Thus, for instance, if we were to have a proper technological museum suited to the purposes of Ireland, it might consist of three divisions; one of those would be a collection of all the raw materials of whatever kind, vegetable, animal, and mineral, existing in the country; the second division would be a collection of any of the raw materials which may be introduced into Ireland from abroad with equal facility as into any other part of the empire; and the third division would be a collection illustrating the processes and methods of working up the two classes of raw materials.

3213. In those processes and modes of working up raw materials, is not there incessant change going on?—Some of the processes may, to a certain extent, be modified; but the change in a given time would not be very great.

3214. You would have to make perpetual additions, would you not?—From time to time, any new products introduced, or any new applications of them, or any new processes for working them up, would have to be illustrated; but the number of real scientific changes in the course of 10 years, going only over the field of industry applicable to Ireland, would not be very considerable.

3215. Would not some of those models become obsolete?—I think none of the models would become obsolete; the best proof of that is, that the Conservatoire des Arts et Metiers et Paris preserveevery instrument they can possibly get hold of, from the earliest times of the history of each particular manufacture.

3216. So as to trace gradually the progress of invention?—Yes. It very frequently happens that the instruction to be derived from an historical collection of machines, is of more use than that which would be derived from new machinery in actual use; that is to say, for the purposes of a school of science.

3217. Such a collection would require a very enormous structure, would it not?—Certainly not; I think the present building at Stephen's Green, with some modification, would be quite capable of affording room for the purpose.

3218. Your collection would be purely typical?—Purely typical. As an example, there is one collection, pretty nearly complete in its way, which represents what the present British ceramic manufacture is. That occupies only a case which is, perhaps, 23 feet or 24 feet long, and it is quite complete. I should say there would not be 50 specimens required to be added to make it complete at the present moment, though it is five or six years old. I once proposed what would better represent my notion of what a technological collection, typical of any manufacture, should be. When I was collecting specimens for the Department of Science and Art for the Irish and Scotch Museums (we were then, I think, under the Board of Trade), I proposed to illustrate lead mining, for example, in this way: to take five or six of the chief lead-mining districts in Europe, selecting those which differed most in the structure of the lodes, the rocks in which the lodes occurred, the processes of dressing them, which would depend upon the two other conditions, and the machinery employed, together with specimens of all the stages of dressing. I estimated that, for about 2,000 *l.*, three similar collections might have been made for that one branch of industry: one for London, one for Edinburgh, and one for Dublin. I believe no such collection has been made in any school of mines, and I believe it would be a considerable benefit to mining industry to have such collections. I specially mention this proposal, for the purpose of showing what I understand by a typical collection illustrative of any particular manufacture.

3219. Do you think you could form a technological collection by donations alone, or to any considerable extent?—Certainly not. A museum formed by donations is a nuisance; it is a mere curiosity shop. But I should at the same time say that there are two kinds of donations; for instance, that very instance to which I have referred, of the collection of pottery which was made by Mr. Wedgwood upon lists which I furnished to him at the time, is a donation in the full sense of the word. He prepared all those specimens for our museum, which was a duplicate of a similar collection for the Industrial Museum of Scotland; and he charged us merely the expenses out of pocket, that is to say, the workmen's time; but he gave up his own time, and disturbed the working of his own workshops for us. I call that a donation, though it is treated in our Blue Books, I believe, as a purchase. In the same way, Messrs. Naylor & Vickers, of Sheffield, made a very remarkable collection of bar-iron, introduced from Sweden into England for the manufacture of steel; and they gave us specimens of bar-ends, with the names of each forge upon it, so that we have a history of the manufacture of Swedish iron; and they alsc gave us bar-ends with

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with similar marks upon them, converted into steel. They gave us also a beautiful set of models of their entire works, copies of those which they exhibited in 1851. I believe, as well as I recollect, that is described as a purchase, but in reality it is a donation. In that sense, donations would be useful to the museum, but the ordinary donations are perfectly useless.

3220. You regard them generally as mere rubbish and incumbrances?—Yes; we do not know what to do with them, and in most cases they ultimately get thrown outside.

3221. Have any descriptive catalogues been published of the technological collections in the Museum of Irish Industry?—There have been several; one of them had perhaps better not have been made. On the whole, I think, technological collections had better not have catalogues; the best description is the descriptive labels on the articles themselves. A mere list of the articles conveys no information; it is a waste of public money to print such a catalogue, which is merely an inventory catalogue, and indeed it is so called; it would be better to put all the information alongside the specimen itself.

3222. At this moment, you have descriptive labels attached to all the specimens, have you not?—We have; I think ours was the first museum that carried out that practice to the fullest extent; Mr. Gages, the curator, carries it out to an extent which involves a description of the entire processes.

3223. The collections of the Royal Dublin Society and the Museum of Irish Industry have been described as duplicate collections; are you of that opinion?—Certainly not.

3224. Will you explain to the Committee why?—It is true that you may get a certain number of specimens of the same substance in the two museums, but they cannot be properly regarded as duplicates if they are required in their respective places under two different arrangements. Even in the same museum itself you may have 50 specimens of the same kind subserving different objects. If such specimens are to be called duplicates, no collections could be formed which would not be in that sense duplicate. It is not by the specimens but by the classification, which in turn depends upon the object, that we should determine whether two museums contain duplicate collections. Nine-tenths of the collections of the Museum of Irish Industry have nothing in common with those of the Royal Dublin Society. They have a totally different object.

3225. It has also been stated by a gentleman of considerable authority, that in the case of these two institutions there is a double staff, double collections, and double lectureships, for identical purposes. Is that a correct description of the state of things at the present moment?—I am perfectly unaware that either of those items are duplicate. I do not know that there is a double staff; I cannot call the professorship of mineralogy of the Royal Dublin Society a duplicate of what is in the Museum of Irish Industry, considering that the office in question was abolished, or rather that the professor was to suppose that he was superannuated, as the Royal Dublin Society had no power to superannuate him otherwise (and his salary was so small that even if he had been a civil servant, the amount he could receive under the Superannuation Act would have been so small that he would absolutely have got nothing); and as it was, to my knowledge, perfectly understood, whatever may be in public documents, that he was merely to continue to lecture, in order that he should not be deprived of his salary, which was only another means of superannuating him. I would not call his office, therefore, duplicate, because, in reality, he would have been superannuated, if it could have been done. I do not know of any other officer who can be said to be a duplicate of another.

3226. Do you consider that there are double lectureships, as regards your own science?—No. I confess, if any arrangement were come to by which the duplication of my duties were abolished, it would be a great benefit.

3227. Are the present buildings which form the Museum of Irish Industry well adapted for the purposes of the museum, in your opinion?—Many improvements might be made in them. Their present form arose from the defective manner in which the votes were passed; they were spread over many years; our provisional character and a great many of our defects are due to the spreading of those votes over so many years. Had the money been voted on a different plan, as the sum voted for Scotland has been, we should long since have been in a different position from what we are in now: all the provisional arrangements for lectures, and all the defective arrangements of the museum are due to the manner in which the money was dribbled out.

3228. Was it a kind of patchwork system?—It was a kind of patchwork system. If a large sum had been asked for at the time, it would have been refused. An annual sum of about 1,800 *l.* a year was dribbled out to the institution, without any promise that the sum would ever be a large one, so as to enable a definite plan to be carried out; and consequently the present buildings have certain defects, which would not, however, require much to remedy.

3229. You think a small sum of money would be sufficient to place the building in an efficient state for the exhibition of the collections of the museum?—Yes, and would double the available space.

3230. Do you think there is much want of a school of mines in Ireland?—Mining is an important branch of industry.

3231. In the Report of the Commissioners of 1862, it is stated that "Mining industry does not occupy in Ireland the prominent position it does in England, but it has made considerable progress of late, and without going the length of the Jermyn-street School, instruction might with advantage be given in geology and mineralogy with especial reference to mining;" do you agree in that?—If I were to take merely what you have read, I would agree with it, but I do not agree with what precedes or follows it; we do not actually want a mining school, that is, a school *eo nomine*, in Ireland. Mining industry in Ireland has not been, and never will be, of sufficient extent to warrant the Government in getting up a special staff for it; I stated that, long ago, in 1854, in a statement I made with regard to a supposed want of that kind in Ireland.

3232. Assuming that there was a school of mines established, the professors of that school of mines would be giving instruction of a far wider character than that merely confined to mining industry?—Quite so; I should say if you had a school of applied science, one of the chairs that

that ought to be established in such a school would be a professor of mining; provided he was a professor of mining, and not a mere chemist or mineralogist; that is, that he was acquainted with mining as such, and with the construction of mining machinery, and the practical working details of mining.

3233. In the Jermyn-street Institution are not there a vast number of students who receive the instruction there afforded, who do not intend to apply themselves to mining?—Yes.

3234. Do you think that something more than a school of mining and agriculture is required in Ireland?—Yes; there is no country that more requires a properly organised school of applied science than Ireland; in fact, all our educational system has been always patchwork, the result of compromise; it has not been constructed on any definite plan, and has, therefore, always failed.

3235. For what branches of industry would you provide special instruction?—I would provide special instruction for almost every branch of manufacture that I think could be carried on successfully in Ireland. I would divide the manufacturing industry in Ireland, for which instruction should be given into five categories, all of which I think ought to be carried out in the one school, because there are certain subjects that are common to all, and there would be greater economy in their being all joined together; I would say, for instance, you ought to have mining and metallurgy forming one group; chemical technology and all the manufactures based upon chemistry as the second; mechanical technology embracing the construction of machines, tools, and mill-work, matters of considerable importance to Ireland, as the third; civil constructions, or engineering as the fourth; and lastly, agriculture.

3236. You would carry on the whole of that industrial education in one establishment?—Certainly.

3237. Do you know of any such school which embraces so wide a range?—Yes, and one that has done immense service; viz., the École Centrale des Arts et Manufactures, which has done more good than any other institution the French have established. Thirty years ago they were pretty nearly in the condition in which we are now in. Ireland, that is to say, some branches of manufacture were in a very imperfect condition, and they had to compete with the long-acquired skill of other countries. This school was established in Paris by private persons, for the purpose of making up for the want of acquired skill by scientific skill, and it became so successful that the Government took it up. They embrace all the subjects I have enumerated, and many others besides that are not necessary to be taken up in Ireland.

3238. Would not the carrying out of such a system require a very large addition to the present staff of professors?—Certainly not, only very few, because the subjects are divisible into two groups; that is to say, the purely theoretical sciences, and the practical ones; with the exception of one chair, you would only have to add the practical chairs.

3239. What chairs would you add?—You would require to add the chair of mining; the same person who undertakes mining might also be the teacher of descriptive geometry and plan drawing, and you would want a professor of agriculture. As to chemical technology, we are in a position to undertake that; for the present, we only want a professor of mathematical physics, a professor of mining, and a professor of agriculture. Of course, if you were to join veterinary medicine to agriculture, as I think you ought to do, you would require a professor of veterinary medicine in addition.

3240. You would be including almost all the functions of the Royal Dublin Society, would you not?—I do not know what their functions are; I could never learn what their special functions were, because they have occupied themselves with almost everything.

3241. What effect would your scheme have upon the duties of the present professors?—It would of course increase the work they would have to do very greatly. When I say it would increase the duties of the professors, I might, perhaps, except one, viz., the professor of practical chemistry, whose course of instruction is now as extended as it perhaps need be.

3242. Would you continue the present system of popular lectures?—No.

3243. Why?—I do not think they are of the slightest utility. France and Germany are two countries in which there is a great development of industrial education, and no such popular lectures are given in those countries, at the expense of the State, nor are they in England. In my opinion such popular lectures should not be maintained by the State.

3244. Do you think, if such a school as you have described were established, it would be attended with a reasonable amount of success?—I have no doubt about it whatever; I believe that, if our education were properly organized in all its details, it would contain within it the elements of success.

3245. You contemplate a great school of industrial instruction, such as there is not in England at the present moment?—We want it more than they do in England, though I think they would be benefited by it too; English industry is so largely developed, they have acquired such skill by long practice, and their mineral wealth is so enormous that they can afford to import skill from every part of the world; there is, in fact, in England, a market for skill wherever acquired. England employs Germans, Frenchmen, and men from all parts of Europe; in fact, some of the largest manufactories in England derive their scientific skill from Germany.

3246. In fact you would wish, in the establishment of such a school of instruction as you have been describing, to set an example to England?—England does not want it so much as Ireland. They can get skill from every place, because there is a field for it there, whereas we have to create that field. Ireland is not a sufficiently attractive field for any person, from outside, to come in and speculate in industry; it must be developed by slow internal growth, and for that purpose you must have persons who possess a knowledge of the laws of nature, and of the materials which constitute the basis of industry, and skill to apply them in the localities in which they are situate.

3247. Is not such a school as you contemplate entirely opposed to the principle of the Government, which is not to give this kind of advanced scientific education?—I can hardly think that they could maintain such a principle, because it is just as useful to give that kind of instruction as to give elementary instruction in reading and writing. I cannot see any distinction between teaching a person art, applied to industry,

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industry, and teaching him chemistry, applied to industry.

3248. It would appear from the letters that have passed from the Committee of Council on Education, that they are entirely opposed to such a system as you have just been describing?—I know they have changed their minds very considerably about it, because several years ago, Dr. Playfair was commissioned to go through Europe and examine into the condition of schools on the continent, and make a report upon their organization, with a view to carry out the organization of the Jermyn-street School, and also the Irish and Scotch ones. It seems to me that if they are at present opposed to such a system it is a mistake. At the present moment, the German Governments pay for such instruction, and many British subjects avail themselves of it; a great many Germans educated in those schools of applied science also come over to England as their chief field; perhaps the Government consider that they can decline to support such a system of instruction, because it is cheaper to allow the German Governments to pay for it.

3249. The Lords of the Committee of Council on Education say, in a letter to the Treasury, dated the 26th of May 1863, "The only justification that could be urged for a continuance of this instruction" (that is, the instruction at the Museum of Irish Industry) "would be that it was of a very advanced character, such as the general science system is incapable of affording, or that, though not at present highly technical, it might and should be made so. Without in the least calling in question the great value and importance of advanced scientific education, my Lords cannot approve of such an action as this on the part of this department. It has not been sanctioned by Parliament in England and Scotland, and the evidence does not show that it was ever intended, when the Museum of Irish Industry was created, that it should become a college of science." The plan you have contemplated would be clearly not in accordance with the views of Government?—Most certainly, that paragraph which you have read is not in accordance with their ideas when our institution was originally established. We were given to understand that we were to be a school of applied science. The very name upon the top of our programme shows that that was their intention. The institution is called "The Government School of Science applied to Mining and the Arts."

3250. Because Ireland is but slightly manufacturing you have assigned as a reason why Government assistance should be given in attempting to develop the industrial resources of the country?—I think it is one of the first duties of a Government to give such assistance.

3251. Mr. Lowe says, "My Lords are unwilling to admit that there are any circumstances in the condition of Ireland so exceptional to the rest of the kingdom as to justify a breach of the well-established principle of non-interference by Government with private enterprise;" what reply do you give to that?—I think, in the first place, the condition of Ireland is exceptional, and exceptional precisely in the point of view he contemplates. I do not see in what way the establishment of such a school would interfere with private enterprise; there is no private enterprise that would ever compete with such a school.

3252. You do not agree in his opinion, that if "Parliament should consider such an institution desirable for the United Kingdom, it would manifestly be far more effective in all respects to establish it, at all events, in the first instance, where manufactures are largely carried on than in Dublin, where there are comparatively but few"?—Certainly not; the exceptional condition of Ireland, with regard to its agriculture, its mining, and its industry, requires that that instruction should be given with special application to that country; no large number of persons would be likely to go from Ireland to any central school; at least, if they did, they would not go back to Ireland.

3253. Do you think that the giving of this industrial instruction would be the means of encouraging in any way manufactures in Ireland?—I have no doubt whatever of it.

Jovis, 9° die Junii, 1864.

MEMBERS PRESENT:

Mr. Dillwyn.	Mr. Lefroy.
The O'Conor Don.	Sir Colman O'Loghlen.
Mr. George.	Sir Robert Peel.
Mr. Gregory.	Mr. Waldron.
Sir Edward Grogan.	Colonel White.

WILLIAM HENRY GREGORY Esq., IN THE CHAIR.

Professor WILLIAM K. SULLIVAN, PH. D., M. R. J. A., called in; and further Examined.

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3254. *Chairman.*] HAVE you anything to add to any answer, or do you wish to make any alteration in any answer, which you gave yesterday?—There was one point I had not an opportunity of quite completing: in answer to a question which I was asked as to whether we had a double staff, I mentioned that the only case in which such an objection could be urged was that of the professorship of mineralogy at the Royal Dublin Society, and I explained that that chair was virtually abolished by the regulation of 1854. By that arrangement the professor of mineralogy and the professor of chemistry in the Royal Dublin Society were allowed to remain, because there were no means of superannuating them; and they were allowed to fulfil their functions as long as they could, in order that they might enjoy their salary as a superannuation; but the fact that their chairs were not to be filled up after their death gets rid altogether of the idea that there could be any double staff.

3255. It is stated, in the Report of the Commissioners of 1862, that "the professor of mineralogy, on the establishment of the Royal Dublin Society, is subject to the condition that a successor to him is not to be appointed"?—Precisely.

3256. You stated, at the conclusion of your evidence yesterday, that you thought that the giving of the industrial instruction to which you referred would be the means of encouraging manufactures in Ireland; will you give your reasons for that opinion?—In the first place, industry is developed either from acquired skill or from the application of science to it. In England the necessity for science has not been so much felt, because, from its great wealth of materials, and from its industry having existed for, I may say, centuries in full development, Englishmen have not needed it, and they have been able to import skill from every other country whenever they have required it. England was the field for scientific skill to come to: in Ireland, on the contrary, we have no acquired skill; the little that did exist in the country has nearly vanished out of it. I think I could show that something like 50 branches of industry have disappeared since 1807 or 1808. There is only one way, therefore, of developing in Ireland that acquired skill which is possessed in England and Scotland, and that is by bringing to bear upon its industry that scientific instruction which has been found so beneficial in France and Germany.

3257. Mr. *Waldron*] Could you put in a return of those trades?—(*The same was handed in.*—*Vide* Appendix.)

3258. *Chairman.*] Do you think that the scientific teaching that is given abroad has been the means of creating trades where trades did not previously exist?—There cannot be the slightest doubt of it, especially with respect to France.

3259. It has actually brought into operation certain branches of trade which were not previously in existence?—Yes; or if it has not brought into operation trades that did not exist in some form, it has developed them immensely.

3260. Do you think that the industrial education which you contemplate would be the means of reviving in Ireland any of those extinct trades to which you have alluded?—I am quite certain it would.

3261. The argument of Mr. Lowe, in his letter of May 1863, goes to the full extent, does not it, that the middle classes should not have any State assistance as regards their education?—I think it does; but in reading his letter, as far as industrial education is concerned, I think that there seems to be some confusion as to what is meant by the term "industrial education;" and as far as Ireland is concerned, there is a breach of the principle which he lays down in the case of the Queen's Colleges. In the Queen's Colleges there are two professorships which are strictly industrial, viz., agriculture and civil engineering.

3262. If we find that a great branch of education is totally neglected, and we are obliged to avail ourselves of the services of foreigners to supplement the want of scientific education in England and Ireland, can it be said that we are interfering with private enterprise, by asking aid from the State to promote that education which it is clear private enterprise has not hitherto given?—I think not; I do not see how private enterprise will ever organise scientific instruction; it has never yet done so in any country, except in the one case of the École Centralé des Arts et Manufactures in Paris; and that school the French Government have taken into their hands.

3263. The State recognises the fact that private enterprise will not suffice to give scientific education, as far as regards the artizan classes?—It does so; in reality the class best able to pay is that which is most endowed, viz., the upper classes; because the universities are endowed, though they may not be endowed by annual votes by Parliament.

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3264. The State assists the lower classes, and so far it interferes with private educational enterprise?—It does.

3265. The State also by subsidizing the Queen's Colleges recognises the fact that private enterprise will not suffice to give in Ireland the advantage of general education to the middle classes?—Yes.

3266. The State further recognises the fact that private enterprise is not sufficient for the purpose of the industrial education of the middle classes, by establishing in those colleges those chairs to which you have alluded?—Yes; by the establishment of those chairs it actually recognises the necessity of industrial education; and I cannot see why they should afford the means of teaching a man how to make a railway, and deny to another the means of learning how to make the rolling stock. It requires just as much science to carry on many manufactures as it does to make a railway or a bridge. The State teaches civil engineering; and it will not undertake to teach other branches, requiring a really higher standard of education.

3267. I presume you cannot see any very satisfactory reason why interference with private enterprise is solely to be objected to in the case of middle class scientific education?—I certainly cannot.

3268. Is not scientific education precisely that kind of education which least clashes with private enterprise?—I am not aware of any private enterprise for teaching science in any large school in Ireland, nor do I believe it possible for private enterprise to take up such a field. It has not done so in any country with success.

3269. Do you think instruction is doubly precious in the eyes of people when it is conveyed with the stamp of legislative sanction?—I am quite certain that it is. I am quite sure that in Ireland they attach considerable importance to it, and they do so in every country.

3270. Scientific instruction has received a great impetus, has it not, since the Exhibition of 1851?—It has, because the necessity for it has been most strongly felt since that time.

3271. Up to that time, the advocates of industrial scientific education had to establish their case upon abstract reasoning?—Yes; they had no opportunity of comparing the actual condition to which manufacturers had arrived in France and Germany under the impulse of that scientific instruction till the year 1851.

3272. It was said that our unrivalled supremacy in trade and manufactures had been arrived at without any technical instruction?—Yes. But the conditions under which manufactures are carried on in Great Britain scarcely exist anywhere else. There is a combination of geological and geographical, and other conditions, to make industry successful in Great Britain, which of course has placed science aside, and the necessity of it was not felt. But as soon as ever Germany and France, and other countries applied science to the means at their command, that is to say, supplemented their natural disadvantages by greater skill and greater command of scientific knowledge, it was found in Great Britain that the race in the long run would be in favour of scientific skill.

3273. And then petitions were sent to Parliament from Sheffield, Birmingham, the Potteries, and from the great towns in England, praying for an extended system of practical scientific education?—Yes; and the Department of Science and Art actually commissioned Dr. Playfair to visit Germany and France for the purpose of investigating the schools of science there, and he published a report upon the subject.

3274. Are you aware that even very recently, within the last week or two, the naval architects have applied to have a class of instruction established at South Kensington for their use, showing that, even in England, in the shipbuilding trade, they feel the necessity of scientific instruction?—Yes.

3275. I think the general burden of those petitions is to the effect that a much higher standard of technical education should be placed within the reach of the industrial classes than they could hope to possess without State assistance?—Quite so.

3276. Have you lectured in the country, under the provincial lectures system?—I have.

3277. And you are thoroughly acquainted with the system?—I am.

3278. Will you give the Committee your opinion of the value of that system?—That system, as has been stated by Professor Jukes, originated with the late Professor Davy; but it remained a dead letter, as well as I recollect, till, in 1839, the late Mr. Kelleher, of Cork, who took an active interest in such matters, pressed upon the Government the necessity of establishing those lectures; and through his instrumentality chiefly the grant was made. The Government naturally placed it in the hands of the Royal Dublin Society, as almost the only body existing at the time by which that grant could be dispensed. At first the selection of lecturers was left to the locality, asking for aid, and a considerable number of eminent men gave lectures. Mr. Brayley, Professor Nichols, and several others lectured in the South of Ireland under that system. Subsequently, when the Royal Dublin Society got the selection of the lecturers, they used it chiefly to supplement the salaries of their professors; and it was only in the year 1854 that the basis was widened to the extent it is now, by making out a list embracing almost every man in Ireland who has any pretensions or claim to be placed upon that list. The lectures, when they were given without any examinations attached to them, I believe to have been productive of a very great deal of good. I can say for myself, I trace my taste for geology especially to the lectures of Mr. Brayley, in Cork; and I believe the real benefit of those lectures was the widening, I may say, of the intellectual horizon of the people, elevating their ideas, and giving to the majority of the people some notion of what science was, so that they might make a provision for it in the education of their children. I do not think such a system is capable of giving much instruction in actual facts. The addition made to the system of compelling the lecturer to be a monitor, and have five or six grinding lessons is about the most preposterous system that could have been devised. I am perfectly certain that, at the end of 20 years, such a system would have done no good whatever.

3279. What you object to with regard to those lectures is the educational portion of them?—Yes. I do not believe that they are capable of combining that education with them. I believe that they would confer a far higher benefit if they were not combined with that system.

3280. What objection do you allege to the principle

principle of first of all awakening the attention of the people, and then as it were deepening the impression that has been produced, and making it permanent, by the lecturer examining those persons who have taken a deep interest in his lectures, and thereby, to a certain degree, enlarging by that examination their sphere of knowledge?—I have not had much experience in that portion of it, but the little experience I have had shows me the complete absurdity of it. There are generally in the town two or three rival schools, the masters of which schools attend the lectures and take notes; and upon these notes the pupils are in reality ground up. I know personally that the persons who carried the prize in two or three instances, I can recollect, had not very much knowledge of the subject, scarcely any; not the knowledge that I would attach any importance to, though it might have carried the prize. I do not think it would have been very beneficial in after-life, because they really relied upon the notes of the master, and it was a mere rivalry between the schools.

3281. Do you think, if the examination system were given up, the persons who attended the lectures would pay more attention to them, inasmuch as they would not rely upon the notes of the masters?—I believe they would; I believe the action upon the public mind would be higher; I believe that elementary instruction in science can only be given at schools where it is systematically taught. I do not believe that public lectures given in that way can give much instruction in facts, but I believe it can elevate very considerably the intellectual standard of a district.

3282. One of the objects of those lectures, as we have heard, is to endeavour to arouse the attention of young men of a district, and to induce them to apply themselves to scientific instruction, so as afterwards to become teachers under the Science Minute?—As to raising up teachers under the Science Minute by that system, I think it is out of the question. The system proposed by the Department of Science and Art can only possibly be successful when it is carried out by teachers under the National Board, or some other similar organization. I do not think any man of capacity would ever be likely to take up permanently the office of science teacher as a means of livelihood in Ireland, and I would say in Great Britain also, the elements of success do not exist. I am quite satisfied that after a teacher has gone say to Cork or to Limerick or to Belfast, selecting the large towns in Ireland, he will exhaust the entire body of men who require that kind of instruction in one or two years When I say exhaust them, he will exhaust the number that would profitably support him; he would have a large class at first, because he would have, I may say, the representatives of two or three generations requiring that knowledge, but afterwards he would only have a small number of persons. Under normal conditions that number would never be sufficient to support a science teacher, as such.

3283. I did not mean to suggest that a few lectures, delivered in a particular locality, would ground a young man in scientific education, but what I meant to put to you was this: whether, probably, the examinations that follow the lectures, and the attention thereby absolutely necessary for the student to give to the course of lectures delivered, would very much determine the tendency of the young man's future life as regards scientific pursuits?—He is more likely to get that impulse by hearing the lecture itself, without being examined upon a few trivial questions which he cannot really understand.

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3284. He has the means of asking questions and receiving answers from the professor during the time of the professor's stay in the town after the delivery of the lecture?—Yes. Under the old system, as well as under the new, he would have that advantage; under the old system the professor was always ready to give answers to questions asked, before or after the lecture.

3285. Do I rightly gather from the answer you gave a little while ago, that you think there is not a field in Ireland which leads us to hope that the scientific schools under the Science Minute can be largely extended?—Not as distinct schools. I can perfectly understand the master of a national school supplementing his income by teaching science to a few boys in his locality who require it, and who are fit for it, and I think the system is very well adapted for the development of scientific teaching in that direction; but as for the establishment of science schools, as such, distinct from any others, I think it is hopeless, and I say more, I do not believe the elements of success of such distinct schools exist in Great Britain. I do not believe that they would be successful in England, except in connection with the school, for general education.

3286. Judging from your own experience of those provincial lectures, what classes generally avail themselves of them?—All classes: my experience has been that you have artizans, tradesmen, and shopkeepers, and sometimes the neighbouring gentry. It varies a good deal with the locality; in Drogheda the class was entirely artizan; in other places it consisted mainly of the middle class and the neighbouring gentry; and in other places it was a mixed class.

3287. There never has been attributed any religious bias whatever, in any way, to those lectures, has there?—Not that I am aware of; but unfortunately, without having had any religious bias, they have suffered from it.

3288. Is that because there has been an impression that they are in any way sectarian?—Yes.

3289. Do you think that that impression prevails generally?—To my own knowledge, very largely. I know in my own particular case, though I am supposed to be above suspicion on my own side, I myself have suffered from it.

3290. In what way?—As a matter of fact, in one town the Young Men's Society of the locality always contrived to have lectures on the same evening as mine, and a large portion of my co-religionists absented themselves.

3291. Could the Roman Catholics have had, in your opinion, any suspicion whatever with regard to the lectures you were likely to deliver to them?—I should think not. Unfortunately, the Irish Roman Catholic gentry, though they talk a great deal about it, do very little for either the science or literature of the country. So far as my experience goes, they invariably absent themselves, whoever may be the lecturer, whether a Roman Catholic, like myself, or a Protestant; they rarely take any interest whatever in those scientific lectures, and of course naturally, that being so, the priests remain also aloof. I can only recollect one instance, I think, in which there were any priests present at my lectures, except

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except on occasions when personal friends of mine attended.

3292. There must be some cause for the circumstances to which you allude; can you give the Committee your opinion as to what that cause may be?—I think it is, in the first place, the ignorance of science, and consequently of its utility, and in the second the apathy that exists generally in Ireland, I am sorry to say, upon those subjects.

3293. When you say those subjects generally, do you mean scientific subjects?—No; I mean higher education, generally.

3294. Do you not think that there is a great desire, in Ireland, for education?—Undoubtedly; but there are so many clashing systems that one side will not accept the teaching of the other.

3295. As these lectures are based upon perfectly neutral ground in every respect, what possible suspicion can attach to them as having any bias whatever?—It is difficult to define the exact reasons: one of them, which one can perfectly understand, is that the majority of the people in Ireland have that sort of feeling, which a gentleman has about receiving elemosynary assistance; in fact, there is a disinclination, on the part of the Irish Roman Catholics, to accept intellectual out-door relief.

3296. For instance, though a Roman Catholic bishop or a clergyman would no doubt have often a very great objection to instruction being given at the national school by a Protestant schoolmaster, he would not have any objection if that instruction were given by a Roman Catholic schoolmaster, would he?—He would if he objected to the system; it is rather the system than the individual; I doubt whether, in my case, there was any objection to the individual.

3297. That objection, in the case of a national school, would be as regards the books that are used, and as regards the omission of certain symbols, and so on, would it not?—Quite so; but in the particular instance of those lectures, there is a general suspicion of them, and a general disinclination to take advantage of them; and there is a neglect on the part of the Irish Roman Catholic laymen to assist in the matter in the way they should.

3298. Are you in favour of the amalgamation of the collections of the Museum of Irish Industry into the Royal Dublin Society; meaning, by the expression "amalgamation," that they should be mixed up together?—I do not think that they could be mixed up, because I do not think that the collections have anything in common.

3299. Therefore, I presume, you object to the principle of anything like a breaking up of the collections of the Museum of Irish Industry and incorporating them with the collections of the Royal Dublin Society: take, for instance, the mineralogical collections?—The mineralogical collections of the two institutions are perfectly distinct. The mineralogical collections of the Museum of Irish Industry are of a twofold character: they are, in the first place, intended to illustrate practically the lectures given by the professors of geology and chemistry, and the practical demonstrations which were occasionally given by the curator, Mr. Gages; and in the next place they are intended to illustrate the direct application of mineralogy to useful purposes, such as, for instance, jewellery, decorative stones, building materials, and so on. And then also, I may observe, there are many ways of classifying minerals; you may classify them in half-a-dozen different ways, and it is very desirable that such distinct classifications should exist.

3300. The collections of the Museum of Irish Industry and the collections of the Museum of the Royal Dublin Society are distinct classifications?—They are. I say more; I do not think it is likely that you would get any two persons who would arrange a collection in the same way. Minerals may be classified according either to their external properties, or their chemical composition; either of those methods is capable of having at least five or six different arrangements under it; and in a progressive science like mineralogy, which is really only a portion of chemistry, a great number of classifications are required, and the oftener changes are made in it, the more is it necessary that the classifications should vary.

3301. Should I be right in calling the Museum of the Royal Dublin Society a great museum for general reference, and the other collections special collections for technical instruction?—That is the idea I have always conceived of the Museum of the Royal Dublin Society, but it should be fully organised. If we had to reorganise in Ireland a system of museums again, it would be desirable that there should be four different museums, whether under the same roof or otherwise, but perfectly distinct: viz. (1.) a biological collection, including a palæontological collection, as forming an essential element of the natural history collection; (2.) a geological collection, properly so called, in which you would have minerals and a palæontological collection, stratigraphically arranged; (3.) a technological collection, perfectly distinct from both; and (4.) an agricultural museum. Each of those four classes of museums is essentially distinct from the others.

3302. Some of those museums are already in the hands of the Royal Dublin Society?—Two of them, and a part of a third, which is mixed up with the biological collection. It would be a great deal better if the present Museum of the Royal Dublin Society were entirely confined to natural history.

3303. Would you place the management of those museums, or any of them, in the hands of the Royal Dublin Society?—I do not think that a private society is exactly the proper body to administer such national institutions. There is no example in Europe of a private society, composed of 1,200 or 1,300 members, being entrusted with the management of a national institution of that kind.

3304. Do you, on any other ground, object to the Royal Dublin Society being entrusted with the industrial education of the people of Ireland?—If the nation pays for education, I do not think it has a right to delegate its functions to any private body. I object on principle to the delegation by the nation of any teaching power to any private body, where that teaching is intended for the general mass of the population, and paid for by the state.

3305. You do not see any analogy whatever between the governing body of public schools and the governing body of such an institution as the Royal Dublin Society, which professes to give industrial instruction to the people, and which is subsidised by the State?—No; I do not see the analogy at all.

3306. Where would you draw the distinction?—The difference is very considerable, intrinsically, between the two; but we must always bear in mind that the governing bodies of public schools are rather to be regarded as a remnant of the

the past than as a model for a new system. It is possible now to introduce a new system, and I think that it would be a backward step to take in this matter the ideas of the past, which in other respects we try to get rid of.

3307. Would you leave to the society the management of the public library?—I would not, on the same ground, and on others. There are, indeed, many grounds on which I would not. One of them is, that my impression of the Royal Dublin Society's Library is not a very favourable one; and I would also say that it is wrong for the State to advance a sum of money, amounting to nearly 1,000*l.* a year, for providing a library for subscribers of two guineas a year. There is no public library in the city of Dublin to which any student who has not a relation or friend a member of the Royal Dublin Society can go; and I have known, myself, students remain three weeks or a month, going, I may say, from hall door to hall door endeavouring to get entrance into that library.

3308. Mr. *Lefroy.*] On what ground do you state that your opinion of the library is not favourable?—Because the collection of books has been made in a very patchwork kind of way. I will take for instance my own science. I cannot get any benefit from the library; I go in vain there for the books I want; indeed I can hardly find there a complete series of anything.

3309. Does that arise from want of arrangement of the books, or from their not being in the library?—From their not being in the library. It is full of text-books, and books that are to be easily had, or ought to be purchased by students and others, while it is wanting to a very considerable extent in that class of literature which ought to be in a great public library.

3310. Sir *Colman O'Loghlen.*] Are not those advanced books which you speak of, accessible to you and others, in the library of the Royal Irish Academy?—No; on the contrary, that is in a worse state. We have no funds whatever for the purpose of purchasing such books. As an instance: very recently, when I wanted to get a volume of Transactions, published in the year 1856, I found it was not to be had in the whole city of Dublin.

3311. Did you try the Trinity College Library?—No; it is not there, I heard; but I am not a reader there.

3312. Would you have had any difficulty in getting admission to the Trinity College Library?—No, not if I volunteered to ask permission; but as a matter of a personal feeling, I would not like to ask the favour.

3313. *Chairman.*] I gather from one of your answers, that you object to the way in which the books are selected at present in the Royal Dublin Society's Library?—Yes; by which, in fact, the library has been formed.

3314. Sir *Colman O'Loghlen.*] Would the funds at the disposal of the Royal Dublin Society allow those scientific works to which you refer to be purchased; seeing that the object of the society is to have a library of general literature?—I think that many of those books to which I refer ought to be bought in preference to some of the others that are there. I am speaking from the point of view that it is intended as a public library for the people of Ireland. If it be intended as a private library, my objection falls to the ground.

3315. *Chairman.*] I gather that you would prefer that there should be a greater outlay upon advanced books, and less outlay upon elementary books?—Yes.

3316. How far would the carrying out of that principle be inconsistent with the theory of its being a library intended for the benefit of the public?—I think, being a library intended for the benefit of the public, it is precisely those books that are required. I think that the State is not bound to assist the public with text-books; but if it is to provide a public library at all, it should provide that class of books not likely to be purchased by private persons, and which should aid investigators in science and literature with the means of carrying on their work.

3317. It is to those comparatively elementary books that the great mass of readers would have recourse; persons who have not the means of purchasing them or obtaining access to them elsewhere?—The general class of readers at the Royal Dublin Society (as far as I can judge from persons who have asked my advice about how to get admission to the library) could very well purchase those books, and they ought to purchase them; but, of course, it is very advantageous to a student to be able to spend the money in some other way, and get a book for nothing.

3318. With regard to the principle of taking books out of the library: do you approve of that?—I think, to a certain extent, that is quite desirable.

3319. How far would you extend that privilege?—I would extend that privilege to all boooks except books of reference. I know that the libraries of most of the Universities of Germany are open, not only to students, but to the towns in which they are situated; any student in a German University, who goes to a professor and gets his name upon a little piece of paper, on presenting it to the librarian, is allowed to carry sometimes three or four books home; and the same privileges are extended to the citizens of the town.

3320. Would you extend that privilege to persons not members of the Royal Dublin Society?—I object to the privilege being placed only in the hands of persons who are elected members of the society, who pay two guineas a year, while the State advances the greater portion of the funds.

3321. You look upon this library as a great public library?—Yes; looking at it from that point of view, I object to its being the monopoly of one particular class.

3322. Do you look upon it as being a library for the whole of Ireland, or merely for the City of Dublin?—I should say that it ought to be a library for the whole of Ireland.

3323. Do not you think if the principle were adopted of lending out books to any person bringing a proper recommendation, persons coming from the country, perhaps, on purpose to consult a particular book, might be subject to very great inconvenience?—Such an objection would always lie against a lending library.

3324. Therefore, the utility of the library would be more confined to the town, while serious inconvenience might arise to the country?—Yes; but I think it would be easy to meet that difficulty by making a rule that, if any person from the country wished to consult a particular book, the person holding it should bring it in for the time required.

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3325. You have swept away a good deal of the functions of the Royal Dublin Society; what would you assign to them?—I think there is plenty left for them to do; in fact, the difficulty is rather the choice; I would leave them their exhibitional functions; they could hold their agricultural exhibitions, their industrial exhibitons, and their evening scientific meetings; in fact, their functions might be very much assimilated to those of such societies as the Society of Arts in London, or the Société d'Encouragement in Paris, and similar bodies, who receive no assistance from the State, and do a large amount of good; they are the proper functions for a private society for the encouragement of husbandry and useful arts.

3326. You would deprive them altogether of their educational functions, leaving them only their exhibitional functions?—That would be my view.

3327. Supposing so large a scheme as that could not be accomplished, have you thought at all whether a line could be drawn so as to prevent the two institutions from overlapping one another?—As a matter of fact, they do not overlap one another now, or rather they would not overlap one another if a little of the rivalry and prejudices which exist with regard to both institutions were got rid of; and there is in reality no overlapping of functions on the part of those actually engaged in the duties of the respective institutions, and who are to a great extent indifferent (as I am really indifferent) as to one or the other, because it is quite immaterial to me where I would lecture; as a general principle there is no overlapping in the two institutions; they have not anything in common.

3328. But, practically speaking, there is an overlapping. I think we may gather from the evidence we have received, that there is a rivalry and jealousy between the two?—That I admit; but that is chiefly upon one side.

3329. Which side is that?—I think it is very easy to guess; the side which wishes to absorb the other is more likely to have those feelings.

3330. Mr. *George.*] Which side is that?—The bigger institution.

3331. *Chairman.*] That is, the Royal Dublin Society?—Yes.

3332. From your experience of what has occurred in Dublin, are you in favour of throwing open museums and gardens, supported by the State, to the public upon Sundays?—Certainly.

3333. At this present moment the Glasnevin Gardens and the National Gallery are open on Sundays, are they not?—Yes.

3334. Do you think that the opening of them on Sunday has been productive of very good effect?—Certainly, it has.

3335. Would you extend the principle still further to the museums?—I would; provided that, in the opening of them, attention was paid to the servants employed, that the staff were increased, or that they got increased remuneration. I think, sometimes, in the opening of museums and public places of that kind, considerable injustice is done to the servants employed, by their being forced to do duties not contemplated when they were engaged. With that reservation, I would open all public institutions of that kind on Sundays.

3336. You think that the opening of the Glasnevin Gardens and the National Gallery in Dublin has been very gratefully received by the people at large?—I do; and the opening of museums on Sundays would do good in this way: it would relieve the museums in the week days of a great number of people who go there. A museum has two functions to perform; one, the higher one, of enabling those who really want to study a particular thing to do so, and the other, to give the public general ideas upon the nature of science, and upon the subjects that engage the attention of scientific men. The working classes (to whom the latter function would be addressed) would chiefly attend, I think, on the Sundays; as a matter of fact the Roman Catholic holidays in Ireland are the days on which there is the largest attendance at the public institutions, and the same would follow with regard to museums if they were open on Sundays; it would relieve the museums during the week days of a large attendance, and so enable the real students to use them on the working days; so that the double object for which a museum is required would be carried out in that way.

3337. Sir *Colman O'Loghlen.*] What is the nature of the library attached to the Museum of Irish Industry?—The Library of the Museum of Irish Industry has chiefly grown up from the purchase of the books required by each Professor for use in his own department.

3338. Are not books of advanced science those works which you principally find there?—Yes, principally; a good many smaller works have been introduced, because we have opened the library to the students in the evening, and a considerable number of text books have accordingly been introduced, and we require at least one copy of almost every text-book in order to place them upon the table at the lectures, and to indicate to the students their general character; otherwise, all the books selected, are the general literature of each branch of science, and chiefly those books that are rare.

3339. Would not it be more proper to have in the Museum of Irish Industry those books on advanced science, the want of which you complain of in the Royal Dublin Society, so as to be easily available to you and the other professors who may want them?—That may be, but as the Royal Dublin Society Library is generally understood to be the only public library in Ireland, it should have the books that a public library ought to have. We are also forbidden by the Department of Science and Art to purchase any book that is to be found in the Library of the Royal Dublin Society, or to be found elsewhere; and I recollect (as I was the cause of it) a considerable amount of trouble about one particular book which cost 50 *l.* or 60 *l.*, at the Museum of Irish Industry, which has effectually prevented us buying any other book of the kind since.

3340. You are a member of the Royal Irish Academy, are you not?—Yes.

3341. Are the books lent out of their library?—Yes.

3342. Have you ever heard complaints at your fellowship examinations that advanced books which cannot be got elsewhere, are taken out of that library?—That is quite true; one of the reasons is, that we have no effective means of managing our library. Just before I left Dublin, the library committee of the academy had a meeting, and they drew up a report upon that subject. We have no library porter, nobody to give

give out the books, and nobody to get them back.

3343. You have heard complaints that books are taken away pending fellowship examinations?—Yes, but that is not an objection to the lending-out principle; it only shows that we are unable to work the library properly.

3344. You do not think that is any objection to the lending-out principle?—I think not; I think, as a general rule, if you examined any person who had been accustomed to borrow books out of any library, he would be very much inclined to defend the principle of lending out.

3345. Mr. *Lefroy.*]—With respect to what you have stated as to the spirit of rivalry between the two institutions, how did it appear to you to manifest itself as being greater on the part of the Royal Dublin Society than on the part of the Museum of Irish Industry?—In the first place the professors and officers of the museum could scarcely have had any rivalry at all with the Royal Dublin Society; we are mere Government officials; we are not a society, and consequently have no corporate spirits, we are merely civil servants, and there are only five or six of us; Government has placed us there, and it is in their power to remove us. Necessarily, therefore, we could have no rivalry with another body with whose functions we have nothing to do.

3346. How has the Royal Dublin Society manifested that spirit?—When one speaks of the Royal Dublin Society, it is a sort of ideal thing, as all corporations are. It would be difficult to give proof that the Royal Dublin Society has manifested such a spirit, but everyone knows that the official acts of a body are not the only matters by which to judge of the spirit that animates the institution.

3347. Do you mean that the spirit of rivalry is an ideal thing?—No; but when you speak of what is generally called the Royal Dublin Society having a rivalry or no rivalry, we should draw a distinction between the body and the soul of the society; the body can only be judged by the official acts, but it is to the soul or motive power that the spirit of rivalry is due.

3348. Can you speak of any injurious effects or consequences ever arising from that spirit of rivalry which you say has existed on the part of that society?—Yes, it interrupted the establishment of a proper system of instruction, by compelling the professors to divide their time between the two institutions, when a proper arrangement might have been come to. The Royal Dublin Society very naturally did not wish to see their educational functions disturbed or abolished.

3349. Do you attribute that rather to a spirit of rivalry than to a desire to do what was considered best for the public on the part of the society?—It was also a spirit of rivalry, at least such is generally believed to have been the case by nine-tenths of the people of Ireland.

3350. Mr. *Dillwyn.*] I understood you to say, in stating your objections to the Library of the Royal Dublin Society, that it was not formed upon a good principle, and also that students had a difficulty in obtaining admission to it?—Yes, because no person is allowed to read in the library who is not introduced by a member; I know perfectly well that they give great facilities; any member is allowed to give recommendations to an unlimited number.

3351. Have you often known it to happen that students wishing to avail themselves of the library have been unable to obtain admission?—Very frequently; in two or three instances for nearly a month.

3352. Sir *Edward Grogan.*]—Can you give me the names of any of the students in question that were unable to obtain admission?—The fact remains upon my memory; but I do not recollect the names.

3353. Were they inhabitants of Dublin?—No, they were students residing in Dublin; some of them medical students, and some students in arts.

3354. Have you been resident in Dublin many years?—Nearly 20 years.

3355. Have you ever known an instance of any person who, in your own opinion, ought to have been admitted, being refused a recommendation?—I should say that if a person seeking admission knows any single member, the facilities of getting in are easy; but if he does not know a member, there are difficulties in obtaining admission; the difficulties in getting into the library are sometimes, perhaps to a certain extent, imaginary; a student does not very much like to be under a compliment to a member.

3356. Did you ever hear that parties by applying to the assistant secretary, Dr. Steele, could obtain permission?—I think Dr. Steele stated that, the other day, in his evidence.

3357. I was not aware of it before; are you aware that admission papers have been sent from the Royal Dublin Society to the Museum of Irish Industry, to be filled up by the professors there, for students desiring admission to the Library of the Royal Dublin Society?—I was not aware that such was the case; the students of whom I spoke had nothing to do with the Museum of Irish Industry; I know that the Royal Dublin Society have been generous enough to place the professors of the Museum of Irish Industry upon the same footing as the members as regards books; a privilege of which I have availed myself.

3358. I was confining my question to students; are not recommendation papers sent in to the Museum of Irish Industry by the Royal Dublin Society, for the purpose of being filled up by the professors in favour of any student who might require admission to the library?—Such papers have never been shown to me. I should say if such papers were sent they would either have been sent to the professors, or the director, or the fact of such papers having been sent should have been communicated to them.

3359. (To Professor *Jukes.*) Are you aware of such admission papers having been sent to the Museum of Irish Industry?—This is the first time I ever heard a hint of such a thing.

3360. (To Dr. *Steele.*) Have such admission papers been sent?—Yes; I sent a large number of them.

3361. When?—Some years ago.

3362. On one occasion only, or on more than one occasion?—On one occasion, with a note to Sir Robert Kane, intimating that those were sent for the purpose of his giving them to the students of the museum.

3363. Are you aware whether any use was made of those papers?—I do not know.

3364. *Chairman.*] (To Professor *Sullivan.*) Do you know anything about them?—I never heard of them till this moment.

3365. Sir *Edward Grogan.*] You stated that the students to whom you referred, as having been unable to obtain a recommendation from any

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any member of the Royal Dublin Society for admission to the library, were not students connected with the Museum of Irish Industry?—No.

3366. In what institution were they students?—They were students in Dublin.

3367. Did you know anything at all about them as regards their suitability for admission into the library?—I did; they were perfectly eligible for admission to any public library; some of them were medical students.

3368. With respect to the selection of books in the library; you stated that, in your opinion, they were not exactly the best class of books, that ought to be there. If I understood you correctly, you said that they were principally text-books?—I alluded chiefly to the branch of science which I cultivate myself. I wish to state that I throw no blame upon the society in respect of the books which they select; I am looking at the library as a public library, and not as the library of a society. I consider that the selection of books in those sciences which I myself cultivate is not such as a public library ought to have; they are mere text-books to a great extent; and there is a great deficiency of those books which a scientific man, for instance, would like to find in a library, but cannot purchase.

3369. You mean that they are deficient in the highest class of scientific books?—Yes.

3370. By whom would those books be principally used, supposing that they were there?—By everybody who cultivated science and literature.

3371. By those who cultivated science and literature in the highest branches?—They would also be used by persons who were making minor investigations, as well as by those cultivating the higher departments.

3372. I understood you to say that, as professor of a particular science, you were desirous of getting books of a very advanced character, and that you did not find them in the Library of the Royal Dublin Society; those books would be valuable only to one particular class of students, would they not?—I think that they might be used by others.

3373. Will you name any English work on chemistry, from the highest to the lowest rank in it, that is not to be found in the library?—Most of the English works are to be found in it.

3374. What is the work which you refer to as not being in the library?—It is not a work specially on chemistry; it is the Journal des Savans, which has a paper on chemistry in it which I could not get.

3375. Because the Royal Dublin Society has not in its library a certain scientific journal, published in France, you think that the library is not exactly what it ought to be?—A public library of literature and science should have such books; I would not go to a public library to consult the ordinary English works.

3376. Are you aware whether the absence of those books from the library arises from the want of funds, or from the want of inclination on the part of the committee to purchase them?—Whether the Royal Dublin Society, or any other persons, had the charge of the Royal Dublin Society's Library, I would be very much disposed to give them very much larger funds than they have; I believe want of funds to be one of the causes.

3377. Is the book which you refer to to be found in Trinity College Library?—I am not aware.

3378. With respect to the provincial lectures, when a town is selected, on its own application, for the delivery of a series of lectures, the professor goes down and lectures to whatever audience may be present, and he then remains a certain length of time in the town, for the purpose of assisting those students who may require his assistance in the higher branches?—I think that is the new arrangement.

3379. It is that new arrangement, which you call a system of "grinding lessons," that you especially object to?—Yes.

3380. Does it not occur to you that that additional assistance, being given to the students who may have received their first impressions upon that particular science from the lectures of the professor, is a decided advantage to the student, though it may be an inconvenience to the professor?—I should say that a student would get that assistance by his own reading as well as the professor could give it.

3381. Do you think that the assistance of the professor, at the commencement of the study of a science, is of no advantage to the student?—The amount of assistance which the student could possibly get from the professor in such a case would be so very small, that I do not think it would counterbalance the disadvantage to the professor himself.

3382. You think that the inconvenience which the professor would suffer is greater than the benefit that would be derived by the pupil?—I do.

3383. But you quite admit that though a mere novice in any particular science might not be able to derive much benefit from such special instruction from the professor, more advanced students would derive benefit from it?—Yes.

3384. Does it also occur to you that the requirement that the professor should remain in a town for some period after his lecture, ensures the faithful discharge of his duty, inasmuch as he has no object in hurrying over his work?—I have no objection at all to the principle of fixing certain limits within which the professor shall do his work. I see no objection to the principle that a certain time should elapse between each lecture; that not more than three lectures in a week should be delivered.

3385. What you object to is, the professor being called upon to give special instruction at the end of a course of popular lectures?—Yes. I consider that the objects of a course of popular lectures would be an elevation of thought in the district, widening their intellectual horizon and awakening them to a sense of their own deficiencies. I believe that that is a very great object, but the additional amount of labour entailed upon a professor by requiring him to remain in the town for class instruction, is not counterbalanced by the results.

3386. But, on the whole, are you of opinion that those provincial lectures are of the highest use and importance in the country?—Yes, with that exception which I have stated.

3387. With the exception of the personal objection which you have stated, you conceive them to be of the greatest utility?—Yes.

3388. Were those lectures of yours, on the whole, well attended?—Very well, generally.

3389. As well as the capacity of the room would admit of?—In some cases rather above the capacity; but latterly the attendance was below the average.

3390. Does any reason occur to you for that small attendance?—I have given my reason for it, namely, that there appeared to be a decided objection to the whole system of lectures on the part of the majority of persons.

3391. On the part of one class?—The largest class.

3392. The main body of students who attend your lectures at present are of the opposite class?—I allude to the provincial lectures and to the time when I used to lecture in the provinces. At one or two of the last courses I think a large proportion.

3393. The Protestant community? — Yes; among them also objections existed.

3394. Have they raised objections to your lectures?—No, quite the contrary.

3395. I collect from you that there is a feeling on the part of the Roman Catholic gentry and clergy that your lectures ought not to be attended; that bad results might follow from them?—No; I stated that there appeared to exist an objection to the system, and not to myself. And I also stated that, as a rule, the Roman Catholic gentry take no interest in them, and that the clergy did not encourage them.

3396. Mr. *Waldron.*] They are passive?—Yes.

3397. Sir *Edward Grogan.*] As to the others, their feeling, as I understand you, is what I have stated?—I think that that is the feeling. Of course it would be very difficult to give positive proof of that.

3398. Do I rightly understand you, that you found no such objection and no such passiveness on the part of the Protestant community?—It depended upon the locality; but I should say that, as far as the Protestant community was concerned, the objection was not on religious grounds; it depended more upon the local conditions. Thus, for instance, in Drogheda, neither the Protestant nor the Catholic gentry took part in the lectures to any considerable extent: that was a long time ago. In other places, on the contrary, they took a very considerable share in them.

3399. Do you recollect the subject of your lectures at Drogheda; was it one more adapted to the artisan class or to the gentry class?—I delivered three courses at Drogheda: the first was adapted to the community generally; the other two were on chemistry applied to the arts, and therefore more adapted perhaps to the artizans.

3400. Did you find the same absence of Protestant gentry on all those occasions?—Yes; because the lectures happened to be delivered at the Mechanics' Institute, which the gentry do not generally support.

3401. Their non-attendance, you think, is to be ascribed to their disapproval of the locality in which the lectures were delivered?—It is owing to their apathy towards such institutions.

3402. Were all the other lectures delivered at mechanics' institutes?—They were in Drogheda, not in other places.

3403. As to Drogheda, you could not arouse the apathy of the Protestant gentry as regards those lectures?—The statement that the Protestant gentry do not attend the lectures would apply more to Drogheda than to other places; in Limerick a large number of Protestant gentry did attend them.

3404. I presume that you are conversant with the general arrangements and operations of the Royal Dublin Society?—Yes, I was a member of it once.

3405. You have very strongly condemned the continuing to a society like the Royal Dublin Society the large functions relating to education, exhibitions, and library at present in their hands, on the ground of its being a private society; have you ever considered the advantages that accrue to the public at large from the personal knowledge, the personal exertions, and the personal superintendence exercised by the members of that society in helping forward the work of education?—If the Royal Dublin Society confined itself to its exhibitional functions, and to its meetings for the encouragement of industrial science, they would effect all that good, and they would have a more active influence upon education than they would if a system of scientific education were placed in their hands, there being an objection in the minds of many to their being entrusted with it. I think, if they confined themselves to such functions as I pointed out (namely, the same functions as the Society of Arts in London and the Société d'Encouragement of Paris fulfil), the society would have a direct influence upon education.

3406. With regard to the popular lectures which have always been delivered by the Royal Dublin Society, do you think that they are useful?—I am not in favour of popular lectures at all where a real positive system of instruction can be obtained.

3407. What distinction is there to be drawn between the popular lectures delivered in Dublin and the provincial lectures delivered in the country; are they not for the same purposes and delivered to the same classes?—Yes, but there is a difference; you have not in the country the means of getting the instruction which you have in Dublin; that is, supposing a school of science existed there, if you had such a school existing in every large town of Ireland, there would be no necessity for provincial lectures.

3408. You stated that in your opinion the provincial lectures were of the greatest importance, in elevating the ideas of the people in the particular district, in widening their intellectual horizon, and in giving them some notion of what science is; do not the popular lectures in Dublin attain precisely the same object?—I think they have done a great deal of good; but I think that their advantages would be superseded by a proper school of science

3409. Does the objection which you have already urged with respect to the "grinding lessons" attached to the provincial lectures apply to the lectures delivered in Dublin?—No, because there is no grinding system attached to them.

3410. Do you consider that there is any professorial power thrown away in popular lectures of that kind?—I think so.

3411. What distinction do you draw between the popular lectures delivered in the city of Dublin, and the provincial lectures delivered in the country; do not they equally aid in attracting the attention of the community to scientific subjects?—In reality, the popular lectures which I would deliver at the Royal Dublin Society and the lectures I would deliver in any provincial town would be the same, and if there were no system of scientific instruction available to the people of Dublin, I would be for supporting that popular system; and in 1854, as far as my position allowed me to do it, I did support the maintenance of the

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the system. I would have been for leaving the system undisturbed in the hands of the Royal Dublin Society.

3412. Do not the two systems, the lectures in Dublin and the provincial lectures, substantially aim at the same objects?—They are for the same objects; the only question is whether, if you have another and more perfect system, they should not be superseded.

3413. How can you get students to enter upon that more advanced system, unless you have first called their attention to the existence of it?—Lately a good many of the schools in Dublin have begun to turn their attention to science.

3414. What schools are you referring to?—Middle-class schools; some of them have persons attached to them who teach the elements of physics and chemistry. One or two persons make a livelihood by lecturing in those schools.

3415. Are the lectures given by those gentlemen of precisely the same character, and for the same purpose, as the popular lectures delivered in Dublin under the Committee of Lectures?—One of the gentlemen who has introduced that system into the Dublin schools frequently lectured in the provinces under the Committee of Lectures.

3416. Are the lectures of the same character?—They are not the same; that is to say, the lectures given in those schools provide that kind of elementary instruction which is far more efficacious than popular lectures. There is no necessity for awakening attention to scientific matters when it has been already directed to them in the schools.

3417. Did I rightly understand you to say that you considered the mining industry of Ireland was over estimated, and that it was not of that importance which some people seemed to attach to it?—I attach very considerable importance to it, but I scarcely think it is of such great importance as to require the establishment of a mining school, while you neglect all other branches of industry. The mines in Ireland have been to this extent over estimated: we have a great number of mines, capable of employing a good deal of capital and skill, but they are not of such a character as would warrant the Government in establishing, specially for their development alone, a school of mines; but, as I stated, if Government established a school of practical science, one of the chairs that ought to be in it would be a professorship of mining. There is room for the establishment of one chair connected with it, as part of a whole school, but not for the establishment of a school *per se*.

3418. Do I understand you to mean that there are other branches of industry in which you think instruction could be more beneficially given by Government than mining in Ireland?—Not more beneficially; equally so.

3419. More suitably?—Not more suitably, but equally so. My idea of teaching science, as regards Ireland, is that it should embrace the whole industry of the country, and not a small fraction of it.

3420. Supposing it was determined to give special instruction in some particular art or branch of industry, which was well adapted to the soil and habits of the people of Ireland, what particular study would you recommend?—I should be very sorry to limit the people of Ireland to any one particular subject, or to any one particular branch of industry. I believe the people and the position of the country are quite suited for a great many manufactures; I believe Ireland is quite as capable of becoming a manufacturing country as any other, taking always into account the relative cost of the raw materials.

3421. Do you regard your mineralogical and geological collection as being very complete, with a view of teaching the mining qualifications of the country?—Yes, the collection is a very good one.

3422. Can you point out any mining undertaking in Ireland which owes its origin to the information afforded by your museum?—The influence of scientific teaching in a country can never be measured by individual results; all the people who have derived benefit from it do not come and tell you of it; it is an imperceptible influence, which is felt through the whole mass of the population. I have never directed my attention to ascertaining what the results may have been.

3423. You stated that, in the course of your lectures, the pupils came frequently to you for explanations in after hours, and that you gave them the benefit of your assistance; have any such applications been made to you on the subject of mining?—I should say more than upon any other branch of industry; while I was engaged as chemist, half of my time was taken up by persons calling upon me with specimens of ores, asking explanations.

3424. Did it ever come to your knowledge that any practical results ensued from those explanations?—I should say a good many persons connected with mines consulted me; but I never took that personal interest in my own labours to inquire what result they led to. To any man who asked me anything, I gave such information as I possessed; I did not pay any attention to final results.

3425. Am I to understand that no such final results ever came back to you?—They may have, I am quite sure they did; but I do not recollect all the various things that I may have heard, showing that such results had followed. Except as professor of chemistry, I have not been actively connected with the Museum of Irish Industry since 1856.

3426. Could it have occurred that any gentleman to whom you had devoted so much time and attention in giving explanation, should have found a mine and communicated the fact to you as having resulted from the knowledge derived from your assistance, and yet that you should have forgotten the fact?—Quite possible; and not only quite possible but, I think, extremely probable. Any amount of instruction may not enable a man to find a mine; the discovery of a mine is a mere accident; what scientific instruction I can give is only to enable a man to do in a shorter way what it would otherwise take a longer time to do, and to do it at the least possible expense.

3427. Can you point to any instance where suggestions which you may have given, and assistance which you may have afforded, for the attainment of the objects you have described, have ended in beneficial results?—I am quite sure I can say, as to results, that I have had very many instances; but you cannot expect a man to recollect all those results. It was my duty to give as much information as I could, but not to recollect every letter I received about results which have followed from his instruction or assistance.

3428. It has been stated that one of the most successful

successful mining companies in Ireland (I mean the Mining Company of Ireland) originated from the lectures of a professor of the Royal Dublin Society; have any analogous instances occurred from information afforded by your institution?—If a couple of years after that result you had asked the Professor of Mining at the Royal Dublin Society, whether any practical result had issued from his lectures, no doubt he would have given the same answer that I do; it is from other persons outside that that information ought to come, and not from the professor.

3429. Can you point to any instance connected with your institution analogous to the one I put before you as connected with the Royal Dublin Society?—For the moment I do not recollect any particular case; I know there have been many.

3430. You also stated, if I understood you correctly, that with regard to some particular branches of industry your collection was most perfect, giving the different stages of the manufacture from the commencement to the conclusion; you alluded specially to the pottery collection, and you said that it was quite complete?—Yes.

3431. So complete that the superintendent of the Sevres works, M. Regnault, expressed his regret that he had not an equally complete collection exhibiting the progress of ceramic art?—Of British ceramic art.

3432. Have applications been made to you for the same special instruction upon that subject as you have explained were made to you with regard to mining?—Yes; I have given a good deal of that kind of special instruction to different individuals, but it is necessary to explain that it has not been my habit when I have given information to any man to enquire his name or business; I have given information to anyone who has called upon me, not inquiring his name or his object; if he has told me the purpose for which he was asking the information, I have interested myself in it for the moment, and then have forgotten it.

3433. Are you aware of any instance of the establishment of a manufacture of that kind in Ireland owing to that collection, and your explanations in connection with it?—I know of one in Tipperary; I do not know whether it was very successful, and I know I was the means of bringing proprietors of clays and sands in connexion with many English manufacturers when I was more immediately connected with the museum than I am now.

3434. You mean that you pointed out the value of the clays and sands in Ireland, as applied to pottery?—Yes.

3435. Have they been exported to England from Ireland?—I have been occupied with other matters since 1856, and therefore I cannot follow out what may have been the results of information given when it was my business specially to give it.

3436. Mr. *Waldron.*] You know only that the facts were as you state?—Yes; in fact I have lost all direct connexion with that portion of the subject.

3437. Sir *Edward Grogan.*] Does the same observation apply to your metallurgical collection, which you stated was very complete also? Do you know of any practical result in the way of the establishment of works from that?—No, not in the way of the establishment of works; but I know of a practical result in the way of preventing the establishment of works where the money would have been entirely lost. It has done good in preventing the carrying out of such works. There are works in Connaught which would never have been established if they had availed themselves of the information afforded by us.

3438. You have saved parties expenditure which they would have incurred in carrying out works that would have been fruitless?—Yes.

3439. Though that might have been beneficial to the parties who were about to undertake the work, do you consider that it was productive of good to the people of the country?—I do not think the misspending of money in fruitless experiments can be productive of ultimate benefit to Ireland, though it may appear to be an advantage for the moment. On the contrary, the misspending of money in connexion with manufactures has done a great deal of mischief to its industry.

3440. On what would you have formed your opinion that those works to which you refer must have been a failure?—On the cost of production, the local circumstances of the place, the price of the product, the price of the raw materials in the locality, the methods they were about to follow, and the whole circumstances of the case.

3441. Was the method proposed to be adopted the English method?—Yes, and that gives me an opportunity of saying in regard to the establishment of schools of science in Ireland, that one of the strongest reasons that could be urged for a school of science in Ireland is this: England is not the best place for us to look to for information about many of our manufactures, because the richness of the resources of England enables English manufacturers to afford to make a great number of blunders that would be fatal to manufacturers in Ireland.

3442. You would admit, would you not, that the long existence of metallurgical manufactures in this country has probably led to the adoption of processes as near perfection as possible?—Not necessarily, because the association of coal and iron in almost all the mining districts of England enables them to produce iron without being obliged to economise coal to the same extent that would be absolutely necessary in Ireland or France. You would not go to a country where coal was to be obtained at a low rate to learn the economic use of it.

3443. I ask you whether the long establishment of those manufactures in this country has not led to perfection, as near as could be, in the processes of manufacture?—In many cases that is so, but a manufacture is improved or perfected only when there is a necessity felt for improving it; when there is no necessity for it, the manufacturer makes no experiments to improve it. If he is not pressed upon by competition or otherwise, he feels no direct interest in improving the manufacture, and he saves himself a great deal of trouble and often loss. It is perfectly well known that manufacturers carry on their old processes for half a century without making any attempt to improve them or their buildings, and, therefore, the long success of a manufacture is no proof that it has arrived in that particular locality at extreme perfection.

3444. I put to you the case of Great Britain; Great Britain, as we all know, is one of the greatest iron manufacturing countries; that branch of industry has been long established and successfully

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fully carried on in this country; I ask you whether, from the experience they have derived from that length of establishment, and from their long practice of the processes used in those manufactures, they are not probably as near to perfection as any other country?—No.

3445. In what country are they superior?—The relative superiority of processes depends upon many conditions; they are nearer perfection in many parts of France and Germany than in England—the methods adopted in Le Creuzot, in France, or in the district of Ruhr, in Germany, are superior to any in England. In the manufacture of steel the processes of Mr. Krupp are so superior to those of England that I am told all the dies of Sheffield and Birmingham are manufactured by him; the cause is simply that, in Le Creuzot and other districts, the cost of fuel is so great that it forces the manufacturer to improve his processes; in a district like Le Creuzot they have to turn their attention to the improvement of processes which the British manufacturer may wholly neglect.

3446. You consider that, in those places to which you have alluded, the process of manufacturing iron is carried on in a superior manner to what it is in Great Britain?—Understanding the superiority to be the production of a superior iron by bringing to bear upon its manufactures every resource which science offers to economise fuel and improve the quality of the product, I think so; they would, therefore, be better models for a poor country like Ireland, where the cost of fuel is very high; supposing we were to become manufacturers of iron, we would go for our process to that locality where the highest skill had been brought to bear to economise fuel.

3447. Was it on that ground, namely, that it was proposed to adopt what you thought was an inferior process to those adopted in other countries, that you considered the intention to establish iron works in Ireland, on the system pursued in Great Britain, might lead to failure?—That was one ground.

3448. Another was the cost of the raw materials?—Yes.

3449. Take first the ironstone, what would have been the cost of that as compared with what it would be in other countries?—The ironstone they had in abundance; but the fuel was at a considerable distance.

3450. Was the ironstone cheaper on the spot than it would have cost in England or Scotland?—Yes; but you must estimate the cost of production, not by any individual raw material, but by the cost of the whole of the materials, required to give a certain produce.

3451. With respect to the coals, what would have been the difference between the price of coals in that locality and the price of coals at any great establishment you please in Scotland or in England?—I went into very considerable details at the time, and published many estimates of the cost in different parts of Europe; they were published in a journal which I conducted at the time, but I do not know now what the relative prices were.

3452. You do not wish to name any precise difference?—I would rather not go into an estimate of the kind now; I went into the details of it at the time.

3453. Labour is considerably cheaper in Ireland than it is in this country, is it not?—I think that is a great mistake; the cost of labour is rather what you get for the money than the amount you pay per diem.

3454. What would be the difference between the cost of labour that would have been employed in these works in question and the cost of the same character of labour employed in this country?—I would rather not now give those details, because I cannot carry all those things in my memory. I made relative estimates at the time, in which I took all those elements into considertion, labour, wear and tear, raw materials, cost of fuel, cost of carriage, and everything. I would not like now to state upon mere memory what those data were.

3455. The skilled labour, that is to say, the superintendence, would probably be the same in both countries?—As far as Ireland is concerned, it would have to be imported, and that is why we want scientific instruction.

3456. Would it cost the same in both countries?—It would be about the same; perhaps a little higher in Ireland.

3457. We have therefore got one of the items cheaper in Ireland than in this country; we have others equal, and we have others which you cannot exactly specify?—Yes.

3458. And yet the practical result of your recommendation was not to make the attempt?—Unfortunately they did make the attempt, and failed.

3459. Practically, the result of your recommendation would have been not to make the attempt?—Yes.

3460. You stated that Dr. Playfair had been sent over by the Department of Science and Art to make inquiries in various parts of the Continent, with regard to the best mode of conducting schools of industry, such as you wished the museum to be?—Yes.

3461. Those recommendations, of course, were reported to the Department of Science and Art?—Yes; I think the Department of Science and Art was under the Board of Trade at that time.

3462. Have they been carried out from that day to this?—No. The School of Mines, in Jermyn-street, is to some extent one of the results of that report. I think the intention was that there should be three such schools, one for each of the three countries.

3463. Is the school at Jermyn-street based upon, or does it embody all the recommendations Dr. Playfair made to the Department of Science and Art after his inquiry?—It was intended to have a school at Jermyn-street, long before Dr. Playfair's report, but I think it has not been developed to the full extent that that report would have led one to expect.

3464. Mr. *Waldron.*] Where is that report to be found?—He made it the subject of a lecture at the Jermyn-street Institution in 1853. I think there must be a Parliamentary Paper embodying it.

3465. Sir *Edward Grogan.*] The only attempt to carry those recommendations out in this country has been at Jermyn-street?—Yes.

3466. That is a very imperfect embodiment of what his recommendations amounted to?—I consider so; it is far below his recommendation.

3467. At the same time, it is the entire extent that the department of Science and Art thought it advisable or safe to go?—The department, like the Royal Dublin Society, is an ideal thing too; it has varied in its opinions so frequently that one can

can hardly say it has ever had any distinct opinion upon anything.

3468. It has had a distinct opinion with regard to the Jermyn-street institution, inasmuch as it has not carried out the recommendations of Dr. Playfair?—That is so.

3469. It has likewise had this distinct opinion with regard to the Museum of Irish Industry, that it has not carried out those recommendations in respect to that institution?—As I have stated, they have broken faith with us.

3470. You mean to say it has not carried them out?—It has not carried them out.

3471. Have they carried them out with regard to the analogous establishment in Scotland?—No; because the institution analogous to it in Scotland has been connected directly with the University of Edinburgh.

3472. In the three kingdoms the Department of Science and Art have not thought fit to adopt Dr. Playfair's recommendations?—They have not carried out many of the ideas put forward in that paper.

3473. Does the grand idea you gave us yesterday of what really was required for scientific instruction in Ireland at all correspond with the recommendations of Dr. Playfair?—What I suggested was derived from my own knowledge of continental schools, and the requirements of Ireland, and it corresponded in principle with what was recommended by Dr. Playfair. I do not know that it would exactly correspond in all its details.

3474. Have you made any estimate of the probable expenditure that would be required for such an establishment?—It would be very little. Taking the present arrangements in the Museum of Irish Industry, my proposition would require only three or four additional professors.

3475. Would the present building be suitable to carry out such a system?—With very little modification.

3476. You stated that the present building was defective in some particulars; what are the defects to which you referred?—If we were to become a proper school of science we would want additional class-rooms; the proper accommodation does not exist as far as that particular want is concerned.

3477. Do you mean that the internal distribution is imperfect?—Yes; arrangements might be made by which we might get a larger amount of space in the museum itself.

3478. Would it involve building?—If you include the roofing over of portions, and wainscoting, and so on, under the term "building," it would; but it would not involve building in the ordinary sense.

3479. I mean, would it involve the building of additional rooms, or making alterations for class-rooms?—They would have to be made.

3480. In your opinion that would not amount to much; what would you estimate it at?—A couple of thousand pounds would convert the Museum of Irish Industry into a proper school. I beg to suggest, that, not being an architect, I cannot speak positively on the subject.

3481. Have you any reason to think that the Department of Science and Art in any of its head or subordinate branches coincides with the view you have just given as to the establishment of a great Industrial College in Ireland?—I do not know what the opinion of the department is upon the subject.

2482. Have you any reason to know that they are of a contrary opinion?—I cannot say, except from the expression of Mr. Lowe's opinion.

3483. Mr. Lowe was vice-president of the Board, and responsible to the House of Commons; being there to answer all questions with reference to that particular department, was he not?—Yes; if he is to be taken as the representative of the department, I dare say he would not say that such a school should be established.

3484. Have you any doubt upon the subject?—As far as Mr. Lowe is concerned, certainly not.

3485. Were you a professor of the institution likewise, when Mr. Adderley was at the head of that department?—Yes.

3486. Have you any reason to doubt his opinion upon the subject?—Mr. Adderley has expressed his opinion so strongly, that nobody can have any doubt upon it.

3487. Then why do you say that you do not know the opinions of the department?—The opinions of the department change so frequently. If I go back to the time of Lord Lincoln, the intention of the Government of that day was to carry out such a school. It was equally the desire of Sir Robert Peel to do so. It was under his auspices chiefly, that the system of instruction which was to be inaugurated according to the information collected by Dr. Playfair, was to be established. I think it was a special subject of study of the late Sir Robert Peel.

3488. Mr. *Waldron.*] Where are those opinions of Sir Robert Peel to be found?—They are not, I dare say, to be found in any blue book, but there is tradition of them amongst those who heard him express them, and also, I take it, to be the legitimate consequence of the movement set on foot before and after the Great Exhibition.

3489. Mr. *George.*] Is there any written or printed document in which the opinions of Sir Robert Peel, upon that subject, are to be found?—I do not recollect any at the moment.

3490. Sir *Edward Grogan.*] Have you seen the Report of the Commissioners of 1862?—I have.

3491. Will you read that passage (*handing the Report to the Witness*)?—"A careful examination, however, of the very full syllabus of the course of instruction makes it evident that it cannot be strictly considered, applied, or industrial in the technical sense. It is a sound scientific education, with a somewhat more than ordinary technical bias; more than ordinary, that is, in comparison with the course followed in any lectures which do not profess to be industrial; but as 32 lectures is the extent of the longest course, and as from the absence of all previous preparation, these commence from the rudiments of the science, and aim at giving a sound knowledge of that science as well as its industrial application, not to one in particular, but to almost every industry, it is evident that no one special application can be fully elucidated."

3492. Do you concur in that?—Certainly not with the inference suggested at the end of it.

3493. What number of lectures did you give?—I have given as many as 47.

3494. If you put "47" for "32," would it alter substantially the meaning of that passage?—It would. The number of lectures was provisional, and no argument, such as that of the report, could be founded upon provisional arrangements.

3495. I am only asking you, as a fact, whether putting one figure for the other would alter the meaning?—As a fact, it would materially alter it.

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3496. Would you be able to fully explain the application of any particular science to any particular industry in a course of 47 lectures?—I think it is quite possible; I think there is a misconception in that paragraph of the nature of science applied to industry; I think it is a fundamental mistake, which is, however, a very common one. Very few people understand what the relation of science to industry is. That report, from beginning to end, is under that mistake.

3497. Mr. *George.*] In what particular respect do you consider that the Department of Science and Art has broken faith with the Museum of Irish Industry?—They intended originally to make it a real school of science. That was our opinion at the time. I always understood that to be the real object of the museum, that it was to be a complete school of science.

3498. You, as one of the professors, formed the opinion that the Department of Science and Art were about to establish an institution on a very much larger scale than they thought fit afterwards to do?—Yes.

3499. Was that opinion of yours also, according to your recollection, the opinion of Professor Playfair, as expressed in the report he made?—This report or lecture embodied the results of his examination of the schools in Europe, and, without specially referring to our schools, foreshadowed, as I think, the intentions of the Government as to Great Britain.

3500. Did he foreshadow a great scientific and industrial institution, such as that you have indicated?—I do not know whether, in that particular document, he specifically stated what would be done; but certainly the impression left upon my mind by reading that lecture was, that the Government did intend to carry out a superior system of scientific education for industrial purposes, not only in England but in Ireland.

3501. It is your feeling that such a large institution as you and he both appear to have concurred in thinking desirable, should be established?—I think so.

3502. To embrace, amongst other things, agriculture?—Quite so.

3503. And chemistry?—Chemistry is one of the pure sciences which stand as it were as the basis of industry.

3504. Zoology?—That is also one of the pure sciences.

3505. Would an institution such as you have been shadowing out comprise those among other subjects of study?—Necessarily.

3506. Will you state to the Committee the different subjects of study that you think ought to be comprised in such a great institution as you have been shadowing out?—I consider, in the first instance, a school of applied science, giving it the extended view I have already given of it, should comprise five groups of professional employments: 1. Mining and metallurgy. 2. Civil constructions, roads, railways, piers, docks, in fact, all works of engineering. 3. Mechanical engineering (tools and machines). 4. Chemical technology (manufacture of chemical products) embracing all manufactures, the processes in which are purely chemical, or in which chemistry largely enters. 5. Agriculture and veterinary medicine. The sciences, which would be the basis of that instruction, I would divide into three heads: I. Pure sciences common to all the groups; that is to say, whatever the object of the man would be, whether mining and metallurgy, or agriculture, the following subjects would enter into the programme: 1. Pure mathematics. 2. Mathematical statics and dynamics or mechanics. 3. Experimental physics. 4. General chemistry. 5. Descriptive geometry and plan-drawing. Those should form the basis of that knowledge. The second group would consist of pure sciences which would only be required in certain cases; that is to say, which would not be required in every one of the professions: 1. Vegetable physiology and classification of plants, or botany. 2. Animal physiology and classification of animals, or zoology. 3. Mineralogy and geology; and, 4. Practical chemistry. The applied sciences, forming the third group, would be: 1. Mining. 2. Metallurgy. 3. Construction of works and buildings. 4. Construction of machines. 5. Agriculture, including forestry, pisciculture, &c. 6. Chemical technology; and, 7. Veterinary medicine.

3507. Those are the different subjects which you think ought to be embraced by such an institution as you have described?—Yes.

3508. Are you or not aware that the study of agriculture is pursued extensively by the Royal Dublin Society?—It is not, however, taught as part of a course of a school of applied science.

3509. However, they have agricultural exhibitions, with a lecturer on agricultural chemistry, connected with them; do you or not suppose that a great deal of useful agricultural knowledge is capable of being conveyed by that society?—Yes; but I go further than that: and say, that the development of the agricultural shows of the Royal Dublin Society would be greatly assisted by what I propose, because the educational functions of the Royal Dublin Society would not, in my opinion, interfere with, but rather assist any real instruction in a proper school of science; the two things would mutually assist each other.

3510. Do you or not think that by the addition of a suitable professor of agricultural chemistry, great and increased good might be done by the Royal Dublin Society in reference to agriculture?—I have no doubt of it.

3511. I think you included botany in that catalogue which you gave us as the subjects which ought to be comprised in any great educational institution?—Yes.

3512. Of course you are aware of the admirable Botanical Gardens that the Royal Dublin Society has?—Yes.

3513. Are you aware that it has a professor of botany?—That is to say, he is professor in the Museum of Irish Industry; Dr. Harvey.

3514. He is professor of botany, and he delivers lectures on botany for the Royal Dublin Society?—He does; in the same way as I and my colleagues.

3515. And he avails himself, I presume, extensively, of the advantages of their admirable gardens?—He lectures there.

3516. And he also lectures, I believe, occasionally within the walls of the Royal Dublin Society itself?—He does; but the practical botanical lectures are given at the gardens with great advantage.

3517. Do you or not think that the society possesses very great advantages for instruction in botany, from the fact of their having that garden; and, the sort of museum of specimens which they have in connection with botany; do not they by the delivery of those lectures, illustrated as they are by the gardens, fulfil in a very great degree

degree the requisites of the botanical instruction, which you would have in this large institution, which you have been speaking of?—No; because there is a want of unity; and there would necessarily be a want of unity in any system that was not complete; one of the great disadvantages of the Museum of Irish Industry has been that our arrangements have been always provisional; that they have not worked into each other, because the Government has put the organization off from day to day. One of the most important points connected with such a school of science, as I have indicated, would be that it should be organised upon a definite plan, so that each part should work into every other part; why should there be two, or three, or four professors lecturing upon portions of the same subject, in different places? It is a waste of the public money to have several lectures on the same subject, given in different places, when the students could attend in the same rooms.

3518. Is not that very much the opinion expressed in the letter of Mr. Adderley that has been referred to; that double lectureships, double exhibitions, and a double staff are not desirable?—It would be, if such existed.

3519. Though you consider the principle expressed in Mr. Adderley's letter is a correct one, you do not think that it applies to the case of the Royal Dublin Society and the Museum of Irish Industry?—Certainly not.

3520. I understand you to say that your opinion is, that no matter how complete the instruction may be in any particular branch or any particular department, if the branches are not all combined together, it cannot be a perfect system?—I think it would be imperfect; great advantage is derived from the working together of a number of men in different branches of science, the different parts of the system gearing into each other.

3521. And the greater the number of kindred and analogous subjects that you can comprise within one institution, I assume you consider the greater would be the advantage?—Yes.

3522. Are you aware that the Royal Dublin Society has a collection of zoology and a collection of minerals?—Yes.

3523. Are you aware that the collections are valuable in themselves if the society had adequate means to arrange them as they ought to be?—They are, and they have not been arranged, because they have not had the means to do so.

3524. You are aware of your own knowledge that the reason why those collections are not arranged, is owing to the want of funds?—I am perfectly aware of that.

3525. A great deal of valuable property is comparatively useless for science and for the public, by reason of that want of funds?—There is a great want in that respect; and it is especially felt with regard to biological science. There is no means for any student adequately to work it in consequence of the condition of that museum.

3526. I need hardly ask you this question: the value of a lecture depends in no degree upon the place where it is delivered?—Certainly not.

3527. It depends upon the information conveyed by the lecturer, his talent and abilities; and it does not in the least degree depend upon the mere locality where the lecture is delivered?—I should have said, taking into account that it possesses due facilities for the lecturer to make his experiments.

3528. Provided the lecturer has due facilities for making his lecture understood, provided he has collections to which he can refer, suitable to illustrate the subject on which he is lecturing, the mere four walls within which the lecture is delivered is a matter of entire indifference to the lecturer?—It ought to be.

3529. It would be to you?—I should feel no difficulty about it.

3530. You do not, as I understand you, approve of any interference with the lecturer as to the arrangement of his course of lectures or the contents of the course?—I do not know that I stated so, but if I did not, I am very glad to have an opportunity of stating so. I would certainly not.

3531. In fact, according to the arrangements of the museums of Irish industry, are their lectures under any control with reference to the choice of subjects or the general tendency and nature of their lectures?—We all meet together with the director, and we arrange our syllabus of lectures, each person being free to arrange his own; always bearing in mind the general requirements of the institution, so far as there is a plan.

3532. You discuss with Sir Robert Kane, I presume, what subjects it would be desirable to lecture upon within your department; and the same happens with reference to the other professors, so that the carrying out of the course is left to your discretion?—Yes; we have arranged the programme in that way; we have not been obliged to alter it very much lately, but when drawing up the programme originally, we entered very fully into it, and modified it; all our arrangements were perfectly provisional; for instance, the arrangements as to the number of lectures to be given; and the lectures to be given in the evening were provisional, we gave a large number of evening lectures at the commencement which were perfectly voluntary on the part of the lecturers; we never intended that that system should have continued; we were under the impression that a school of science would be organised, and all our work would be in the day.

3533. Whatever arrangements with regard to the lectures are made, they are made with the concurrence and approbation of Sir Robert Kane as director of the institution?—Yes.

3534. And he in his turn is responsible to the Department of Science and Art, by whom he is appointed?—With the general arrangements I should think, but I hardly think that it would enter into his idea (and he certainly never did so) in any way whatever to interfere with the actual syllabus of any professor.

3535. At the same time (not assuming it likely that such a case could occur), if the director of the museum of Irish Industry, or if his superiors of the Department of Science and Art had occasion to disapprove of the course pursued by any particular lecturer, I need hardly ask you whether it is not quite open to them to do it?—It is quite open to Sir Robert Kane as director to bring the matter under the notice of the authorities, and to have it investigated.

3536. I understand you to say, when on the subject of the committee of lectures, that the chief advantage of them was, that they did not interfere with the lectures?—I said, I thought it was a good proof of their common sense that they did not interfere.

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3537. Do you mean by that that it is a proof of their common sense not to interfere unduly in the control of the lecturers; or do you mean to convey that they are not a committee that would show common sense in taking any part in scientific matters at all?—It is one of those cases where we are rather too much in the habit of putting the wrong man in the wrong place.

3538. Do you apply that to the committee of lectures?—I think, to some extent. As I stated, it would be something like appointing a professor of chemistry or geology to regulate the sittings of the Law Courts; I think that scientific men are generally the best judges themselves of the details of arrangement of scientific education, as lawyers are of law.

3539. You would as soon let a body of scientific men regulate the sittings of the Law Courts as allow the committee of lectures to have any sort of control in the selection of subjects, or the arrangements to be made for the giving of scientific lectures?—I am only giving my individual opinion; I do not think such committees, however high may be the social position of their members (they not being immediately interested in the details of the subject, and very often unacquainted with them) are precisely the people to regulate such things.

3540. I need scarcely ask you whether you are acquainted with the Rev. Dr. Lloyd?—Yes.

3541. Sir Richard Griffith?—Yes.

3542. Sir Robert Kane?—He is the director of the Museum of Irish Industry.

3543. He is also on the committee of lectures?—Yes.

3544. Do you know Mr. Galbraith?—Yes.

3545. Do you seriously apply to gentlemen of that class the remark you just now made to the Committee, as to the entire unfitness of that body to in any way whatever interfere with scientific lectures?—I have not said that they are entirely unfitted, by any means. I beg to say that is very far from my notion. I only speak generally with respect to committees that are appointed in Ireland in all questions connected with education; they are selected rather from their social position than from their acquaintance with the details of the subject; and very frequently I have known, when they have been perfectly fitted to fill the office, they have had other duties to perform which have interfered with their performing that duty.

3546. Do you apply those observations to Dr. Lloyd, Sir Richard Griffith, Sir Robert Kane, and Mr. Galbraith?—Sir Richard Griffith is so much employed that he would not be likely to attend to it very much.

3547. You are aware, probably, that no gentleman in the kingdom has devoted so much of his thought and so much of his attention to the affairs of the Royal Dublin Society and to its smallest details as Sir Richard Griffith?—No; I am not sufficiently acquainted with the Royal Dublin Society to know that.

3548. You are not aware that he has taken great practical interest in the affairs of the society?—Very possibly he has; I am not aware of it.

3549. I presume you are of opinion that he would be perfectly competent to do so; and that even in the matter of scientific lectures, his opinion would not be altogether of no value?—I certainly would attach very considerable importance to his opinion on any matter, provided he had devoted sufficient time to examine into it.

3550. You would apply the same remark to Dr. Lloyd, Sir Robert Kane, and Professor Galbraith?—Certainly.

3551. Therefore you do not make any objection to the personal fitness, at all events, of those four members of that committee of lectures, to interfere, as far as it might be desirable for any individuals to interfere, with the ordering of a course of lectures?—It is almost unnecessary to ask a scientific man that question, because those gentlemen are perfectly well known; and, of course, I should have the greatest respect for their opinion, provided I was perfectly satisfied that they had time to study the question.

3552. Do you mean to state as a fact that that committee of lectures have not devoted any, or sufficient, time or attention to the consideration of those matters?—I have not stated that they have not or that they have.

3553. May not the Committee assume that when gentlemen of that character undertake the duties of an office, they discharge them properly?—No. There are a great many committees in Ireland in which the highest judges are *ex officio* members, who never have attended them.

3554. I am not speaking of how ordinary committees conduct their duties; I am asking you now with regard to Sir Richard Griffith, Sir Robert Kane, Professor Galbraith, and Dr. Lloyd: do you think that they are gentlemen who would undertake the responsibility of advising upon courses of scientific lectures, and neglect that duty by not attending to it; or that they would allow their names to be made use of if they did not really undertake the responsibility?—I suppose that when they accepted that responsibility they fully intended to carry it out, I dare say when any man takes a position on any committee, he purposes to do his best upon it.

3555. Do you know as a fact whether those gentlemen have discharged their duties?—I know so little about the joint committee of lectures that I am unable to make any statement whatever with regard to them.

3556. When you said that the chief advantage of the committee of lectures was that they did not interfere, you had in view, probably, committees of the class such as you have described, who undertake duties without feeling the responsibility of discharging them, and not the four gentlemen I have just named?—I gave it as a general idea. I never had any relation with the joint committee of lectures individually or collectively, except at the time when I lectured in the provinces, and I had all my communications with the secretary of the committee.

3557. Do not they, through their secretary, Dr. Sidney, regulate the arrangements in connexion with the provincial lectures?—Yes. The provincial lectures are well managed. I was referring to lectures given in Dublin, which are supposed to be under that committee; and I instanced it as a proof of their good sense (and I would say also of their gentlemanly feeling) that they did not interfere with the professors.

3558. Do I rightly understand you to say that there is any difference in the mode of action adopted with reference to the Dublin lectures and that adopted with reference to the provincial lectures?—I should think that they leave the Dublin lectures entirely to the professors.

3559. Does not it come before them to consider

sider what the Dublin lectures are to be also?—It may be; our director is a member of the committee; he may bring the subject under their notice; he may take our programme and lay it before him.

3560. To Dr. *Sidney.*] The programme is laid before the committee, but inasmuch as it is a copy of the one of the previous year, they do not require to interfere. There was some little interference at the outset, and some disputes, which finally had to be referred to the Department of Science and Art; but practically, it is now the same thing every year.

3561. Mr. *George.* (To Professor *Sullivan*).] Practically the committee of lectures approve of the courses of lectures; that is to say, they do not dissent from the courses of lectures given by the Dublin professors?—I suppose so.

3562. Have you any doubt if gentlemen, such as those four I have named, saw reason to disapprove of lectures, whether intended to be delivered in Dublin or in the provinces, they would do so in the discharge of their duty?—I think that they would be bound to do so.

3563. And would do so?—I am quite sure that they would.

3564. You were asked which of those two bodies was most anxious to absorb the other; does it appear that, practically, the larger institution is more anxious to absorb the smaller one, bearing in mind the evidence you have given with respect to the establishment of a large school of science at the Museum of Irish Industry?—I only gave my own opinion; I do not know how far my colleagues would be inclined to go with me in the matter.

3565. Would you if you had your will have at the Museum of Irish Industry an institution similar to the Ecole Céntrale des Arts et Manufactures?—Not exactly; I do not think that Irish Industry requires development fully to that scale, though it might be on the same general principle; we would not require so extensive a staff.

3566. If a great institution like that were established, and either of the existing institutions was expanded at all to approach its dimensions, would not the effect of that be to absorb what would then be the minor institution?—I do not think that it would absorb it; for instance, suppose the Government chose to establish such a school of applied science as I have contemplated, I do not think it would affect the real position and work of the Royal Dublin Society in the least; therefore it would not absorb it.

3567. Would you have botany, zoology, mineralogy, and agriculture in duplicate in the two places?—Certainly not, nor are they now. It matters not whether the institution itself be in the Royal Dublin Society's building, or in Stephen's-green, or anywhere else. The institution may be divided into two parts as far as lectures are concerned; but it is rather the government and organization that I contemplate.

3568. Provided that those two institutions, or one, as the case may be, was under one supreme government control pervading the whole of it, through all its departments and branches, that is what you would seek for, and you have not any particular desire that the lectures of one class should be given in one place, and the lectures of another in another?—Quite so; provided also there was a unity of plan in the organization of the lectures themselves.

3569. The main thing in your view would be that it should be the Department of Science and Art, or some other Government body having competent authority, by whom all scientific institutions should be regulated?—I would only go so far as a school of science applied to the Arts, bringing those different elements that would be comprised under it (botany, zoology, and so on) into harmonious action, and making them part of the branches of the school, placing them under one head, and making that head responsible to the country; for I object, as I stated before, strongly to the State delegating to private persons their functions.

3570. Still, if the State finds the duties so delegated to those individuals properly carried out, and chooses to entrust its money to those individuals, is there any great cause of complaint?—There is. In a country circumstanced as Ireland is, divided as it is between so many shades of opinion upon matters connected with education, I do consider that it is very dangerous for the State to delegate to any body such an organization, and least of all to a society constituted as the Royal Dublin Society is.

3571. Is not that begging the question. I assume that the State keeps the supreme control altogether in its own hands. Whether it uses as its instruments professors, or a committee of lectures such as we have been describing, composed of Dr. Lloyd and the others, provided the duties are well done, and that the State gets value for its money, is not that a matter between the State and the party it employs, and nobody else?—There is always an objection to divided authority, and to placing a matter of that kind in the hands of a changeable body, not directly responsible.

3572. Mr. *Waldron.*] In an early part of your evidence you spoke, if I understood you correctly, of the evening classes being attended, amongst others, by pupils of apothecaries, whom you thought unfit persons to be admitted to those classes?—My objection did not apply to their attending evening classes or lectures, or any laboratory work; it applied simply to what appeared to be a recognition of the principle, which would be dangerous to us and to any institution established on our basis, of competition with private schools; it applied simply to the act of the director or whoever did it, getting the place recognised by the Apothecaries' Hall of Ireland, which I consider to be converting what was originally intended to be a purely industrial college or school into a species of medical school, doing, I may say, in my opinion, some mischief to medical education.

3573. Has not Apothecaries' Hall a professor of chemistry of its own?—No.

3574. Is it not the case that those apothecaries' apprentices have no means of procuring chemical education, except in the Museum of Irish Industry?—The apothecaries in Ireland are medical students in the full sense of the word; that is to say, they have the right to practise medicine. It is right, therefore, that they should go through a regular course of studies in a medical school; and it is naturally also an advantage to the apothecaries to whom they are apprenticed to get as much work as possible from them; and I am sorry to say that, in the medical schools in Ireland (and I suppose the same thing applies to England), the system of giving certificates without attendance upon lectures, has become so or-

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ganized that students may actually sometimes get a certificate without having even attended a lecture.

3575. Sir *Edward Grogan.*] Is that within your knowledge?—Yes. In one particular case a student received the certificate from a school which I would rather not name; and he assured me he had never been present at any lecture at that school, and it was his firm belief that the lectures were not delivered. Those apothecaries' apprentices are not like druggists' assistants, for whom I would say the Museum of Irish Industry would fairly be available; they are truly medical students, who have proper schools of medicine to go to.

3576. Does that answer apply to Apothecaries' Hall pupils only, or to the general class of medical students?—A very large proportion of the medical students in Ireland are, in reality, apothecaries' apprentices; they are recognised by Apothecaries' Hall, and they subsequently become surgeons. My objection applies, not to the attendance of those students in any way, but rather to the statement in our programme, of our being recognised by the Apothecaries' Hall.

3577. Have you any return of the rank in life of the persons whose children attend your classes?—No, I have kept no record of that; I only recollect that the evening lectures at the Museum of Irish Industry have been very largely attended by artisans.

3578. Has not it been your habit to record the class of life of the parents of the pupils?—No; but in most cases I have asked the students in the day classes (that is to say, in that portion of the course which I consider to be the principal business of the place) what occupation they intended to follow.

3579. You had never made any memorandum of the rank in life of the pupils' parents?—No.

3580. Have you ever been at the Ballycorus Works of the Mining Company of Ireland?—I know them very well indeed.

3581. Have any of your former pupils any occupation there?—One.

3582. Is the Ecole Centrale des Arts et Manufactures now combined with the Conservatoire des Arts et Métiers?—No; they are distinct institutions; they are both now Government institutions. The Conservatoire has a number of professors attached to it, who give public lectures, while the Ecole Centrale is a school of special science.

3583. Are not the professors at the Conservatoire some of the most distinguished men in France?—They are. M. Payen, M. Peligot, General Morin, M. Pouillet, and almost every distinguished man in Paris, is connected with one or the other of the two schools.

3584. The lectures which are given at the Conservatoire are what are called popular lectures, are they not?—They are popular, in the sense in which the French understand the term popular; that is to say, they are lectures which I would be glad to attend myself.

3585. They are, as distinguished from those at the Ecole Centrale, more illustrative, are they not?—Yes; they are more popular.

3586. The French Government keep up a staff of eminent men there, for a species of lectures which I understand you to undervalue?—There has been a considerable discussion in France about that.

3587. About the maintenance of that staff?—Yes.

3588. The Government appears to be in favour of the popular system?—At all events it has maintained that staff; but it has also shown a desire for the establishment and extension of the other system, by taking the private speculation of the Ecole Centrale des Arts et Manufactures into its hands.

3589. Did I understand you rightly to say that you thought popular lectures are of no use, that they should not be supported by the State?—I make the distinction, that where you have no other system of instruction, they may be of use; though I do not think they should be continued when there are other means of instruction. The lectures in the country have been attended with considerable benefit.

3590. You told us that your own taste for a particular branch of science was evoked by hearing Professor Brayley lecture in Cork; how do you reconcile that with your disparagement of popular lectures; that was a popular lecture, was it not?—Yes; but a great portion of my evidence about provincial lectures went to prove the utility of those lectures in awakening attention to scientific matters.

3591. I collected from you that you rather undervalued those popular lectures, and that it was not desirable to continue them?—I should have preferred, if I had had the opportunity when a boy, of attending better lectures; when I say "better lectures" I do not mean to say anything disparaging to those lectures, but a more systematic course would be more desirable; still, in the absence of such a systematic course, I would prefer some lectures to none at all.

3592. You mentioned that Ireland had a dislike to intellectual out-door relief; and that the Irish Roman Catholic laymen were to blame for a disinclination to acquire scientific education?—Rather, perhaps, an apathy for what they do not value. I say that they are to blame for not having come forward to assist in any organization for the advancement of education generally.

3593. The result being, that in your opinion, the lower classes are not so well educated as they otherwise might be?—They have not taken advantage of the opportunities offered to them, in consequence of the apathy of which I have just spoken.

3594. Will you tell us in what way the lower classes are not so well educated as they otherwise might be; do you think that the Roman Catholic laity could interfere in a matter of that kind?—It is not, perhaps, the lower classes who are not well educated, but rather the middle and upper. As to the Roman Catholic laity, they might have taken a part, for instance, on committees formed for those provincial lectures; they might have attended the lectures themselves, and given them their countenance; they might also have assisted to place the higher education of the country on a proper basis.

3595. Would that be of much value?—Unquestionably it would.

3596. You complained of the Journal des Savans not being in the Royal Dublin Society's Library; were you here when Sir Robert Kane gave his evidence?—No.

3597. Will you read over those two or three questions and answers (*pointing to Question* 1433); would it not appear from that, that it was the duty of the director or the librarian acting for him,

him, to provide that Journal des Savans for the library of the Museum of Irish Industry?—I dare say if I had actually put down on the recommendation book the particular number of the Journal des Savans that I wanted, it would have have been procured; if I had stated that it was positively required for my lecture.

3598. It is a serial of established reputation, is it not?—It is.

3599. Is it not in your judgment a work coming within the description Sir Robert Kane gave of works that ought to be in the library of the museum?—Scarcely; it would scarcely come within our scope.

3600. Why do you complain that it is not in the library of the Royal Dublin Society, if you say that it does not come within the scope of your own?—It comes plainly within the scope of a large public library, and as a matter of fact they have themselves felt that to be so, for they commenced taking it in in the year 1862, or rather re-commenced it. They dropped it some years ago, and commenced taking it in again in 1862.

3601. Do you happen to know whether any of the professors of the Museum of Irish Industry have ever recommended the librarian of the Royal Dublin Society, or the committee, to procure any particular work?—I am not aware.

3602. Do you not know that Dr. Harvey has?—He may have; it is a matter I have never had any conversation with him upon.

3603. If you had communicated to the librarian your desire to have this work, and that you were of opinion that it ought to be in the library of the Royal Dublin Society; do you think it is likely they would have procured it?—I am unable to form a judgment upon that. I dare say they would; I know that the booksellers always send or used to send to the society a duplicate of every book ordered by any person who is supposed to be following a particular pursuit in Dublin. I know when I have occasionally ordered an out-of-the-way book required for a particular purpose, I have found that several copies have made their way to Dublin afterwards. I dare say if I had asked them, they would have got it.

3604. From what you know of the management of the library, have you any doubt that if sufficient funds were voted by the State, those works that you think ought to be there would be procured?—To answer that would be giving a theoretical opinion which I can scarcely form. I do not know whether they would or not.

3605. You did not make the application to them to procure that book?—No.

3606. You stated something about students in Dublin obtaining certificates for attendance at lectures at medical schools which they never attended; will you define what you mean by medical schools?—There are very many medical schools in Dublin, and in other parts of Ireland.

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3607. Take Dublin or Ireland, whichever you like; will you define what you mean by the word "medical school"?—I am not quite prepared to name the particular school.

3608. Was it a school?—I stated that generally there was a laxity about giving certificates; that is perfectly notorious, but I instanced one particular case in which a person did not attend at all in a school, without mentioning where.

3609. Do you extend your remark that pupils obtain certificates of attendance at lectures which they do not attend to, what are considered the medical schools of Ireland generally?—I beg to draw your attention again to the distinction I made, that there was a laxity as to attendance at the schools generally; but I instanced one particular case where a student got his certificate who did not attend at all. That is the distinction I wish to maintain.

3610. What do you mean by laxity of attendance?—That a student gets a certificate who may only attend half the number of lectures.

3611. You state that as a fact?—Yes.

3612. Take, for instance, the College of Surgeons; do you mean that there is any such laxity in connection with that institution?—I decidedly decline to answer with reference to a particular school or schools; that is a thing I could not do in evidence of this kind.

3613. Do you mean the Committee to understand that it is the practice of the medical schools of Ireland, or of Dublin, to give certificates to pupils of attendance where they do not attend?—I beg to draw attention again to the distinction I made, that there was a laxity in enforcing attendance at the lectures of the medical schools in Ireland.

3614. Do they give certificates of attendance where that laxity prevails?—In many cases they do. I did not wish to be understood as saying that it was a general thing to give certificates in cases where there had been no attendance at all.

3615. You only know of one instance where a pupil has got a certificate where he has not attended a lecture at all?—Yes.

3616. But you stated that laxity in enforcing attendance at the medical schools in Dublin was common?—It is pretty general. There may be an exception of a school, and there are exceptions of professors; but I say the laxity is very general.

3617. You did not make any exception when you first made the statement?—Because I made it general, and I put the word "general" before it.

3618. I ask you again, now that your attention has been called to the fact that there are exceptions, is this laxity of attendance, and this granting of certificates, notwithstanding such laxity, a general practice in the medical schools?—It is general; but there are schools and there are professors who are exceptions to the rule.

ROBERT GALLOWAY, Esq., called in; and Examined.

3619. *Chairman.*] WHAT is your present position in the Museum of Irish Industry?—I have to teach practical chemistry; I had better, perhaps, state the duties that were first imposed upon me, or at least which I at first undertook to discharge, and then state some alterations that have been made, which will also show what the department, at the time I was appointed, contemplated. In November or December 1856 I received a letter from the Department of Science and Art, requesting me to go to Marlborough House, where I think they were then located; when I went, Dr. Playfair informed me that the situation I now hold was vacant, and he said as they were very desirous that they should have a practical school of chemistry in Ireland, similar to the one in the College of Chemistry in London, and as I had devoted considerable attention

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tention to the teaching of the science, if I would accept it they would be very willing to appoint me. At the first interview I refused the situation on account of some peculiarities about it, but at the second interview I accepted the appointment. My principal duty was to teach practical chemistry in the daytime; I had also to teach a class, two months in the year, in the evening; and in addition to those duties I had also to perform any work that the Irish Government wished undertaken; and also I had to make analyses for any private individuals, who wanted them, of course on the payment of a certain sum. About three years ago (I forget the exact year, but it was the year after Dr. Playfair left the Department of Science and Art), Mr. Cole visited the Museum of Irish Industry, and he at once said he thought it was absurd to keep a man, paying him 200*l.* a-year, to undertake things for the Irish Government that they might never require; I certainly agreed with him in that, and said that if nothing further was to be done I would be very glad to leave; but he said, as to the teaching of practical chemistry, that was a totally different thing: and he said, that for the future the Government would only require from me the teaching of practical chemistry. There was a question raised at that time with regard to the assistant chemist; he said, that of course I should require an assistant to assist me in the discharge of my duty, as Dr. Hofmann has in the College of Chemistry, and an assistant was appointed. My duties at the present time, as defined by Mr. Cole, are simply to teach practical chemistry.

3620. Do you think it desirable to have in the metropolis of Ireland a school for teaching those sciences which bear upon Irish industry?—I do. I agree with a great deal of what Professor Sullivan has stated with regard to Ireland, that it is deficient in natural resources, that it is not rich in coal and other materials, as England is, and that if Ireland is to be a manufacturing country it must be brougbt about by superior intelligence. Then, again, manufactures change continually with every advance in science; so that if to-day people say Ireland could not to be a manufacturing country the thing might be totally changed in the course of a year or two.

3621. Do you consider that there is any such institution in London?—There is the College of Chemistry, which is supported by the State.

3622. That has been amalgamated with the Jermyn-street institution, has it not?—Yes. I may state how the College of Chemistry came to be established. Formerly the teaching of practical chemistry was carried on something in the same way that the teaching of civil engineering was carried on. A young man was placed in a laboratory of a practical chemist, and if he got on well and good, the gentleman who had charge of the laboratory did not devote much attention to him. Liebig altered that system altogether, and he commenced with a course of qualitative analyses. Not only must qualitative analyses precede quantitative, but by the study of qualitative analyses the student becomes better acquainted with the properties of a greater number of substances; and, therefore, if he is going to apply science to abstract research or to industrial pursuits, that system is more advantageous than the system previously followed. Some gentlemen in England having become dissatisfied with the schools of chemistry in England, invited Dr. Hofmann (who was then professor in the University of Bonn, and who had been one of Professor Leibig's pupils in the first instance, and afterwards one of his assistants) to come over to England. He came over, and those gentlemen raised subscriptions throughout England, and built for him the College of Chemistry in Oxford-street, which has been of very great service to England, not only in itself, but in the way of stimulating other schools. The late Dr. Fownes was appointed professor of practical chemistry in University College owing to that movement. Dr. Playfair was at that time professor of chemistry in the school of mines, and when he left the school of mines for the Department of Science and Art, the gentlemen who had subscribed towards building the College of Chemistry, and who had also given a salary to Dr. Hofmann, came to the Government and said, if they would appoint Dr. Hofmann to the vacancy which occurred at that moment in the school of mines, they would hand over the school of chemistry with all its apparatus to the Government.

3623. Thus the private society became incorporated with the public institution?—Yes; I cannot refer you at this moment to the report they drew up, but they stated that it was a great disadvantage for students to be connected with a private school, and that it would be more advantageous for the students if it was a purely government establishment.

3624. May the Jermyn-street institution be called a college for industrial teaching, or is it strictly a school of mines?—I believe as a school of mines it has failed; but as what may be termed an industrial school, it has been highly successful; I base my reasons for that view upon this ground: there was a report drawn up on the Geological Survey, the Geological Museum, the School of Mines, and the Mining Record Office in 1862, signed by Earl Granville, Sir Charles Trevelyan, and the Honourable Mr. Lowe, which gives the number of students in the school of mines, dividing the students into matriculated students (that is to say, students going through the entire course, and who are supposed afterwards to apply themselves to mining), and occasional students who only attend one or two of the courses; they found, on examination, "that the annual average of matriculated students during nine years has been only 12, that of occasional students 54"; they then observe, "the number of matriculated students must, therefore, not be viewed as the only test of the school"; if we examine the programme issued by the school of mines, we find that many even of those 12 that have passed through the full course, and who might be supposed to intend to devote themselves to mining, have been ultimately employed on totally different subjects; I find that 11 have been employed either on the geological survey in Great Britain, or in Tasmania, or Trinidad, or other places. In the report above referred to the number of students who have actually applied themselves to mining is not given, and it shows the difficulty which there is in schools of knowing what finally becomes of the students, unless they get some public appointment; now, if Great Britain, with all its mining wealth, does not furnish 12 students a-year for mining pursuits, I do not think a mining school in Ireland would be successful. In Trinity College or any of the old universities, or the Queen's Colleges, the students pass through the

the same course of general education, and this fits them for any one of the different pursuits in which they may afterwards engage; so it is in science; if you teach a man science thoroughly he can devote himself to a great many different industrial pursuits; and, therefore, if the Government were to go to the expense of founding a school for teaching the sciences, I think they could expend the money with greater profit if they were to enlarge the sphere of the school rather than to restrict it to mining students alone.

3625. You think that the success which has attended the Jermyn-street Institution is owing to the general scientific education given there rather than to the special mining education?—Yes; they had only an average of 12 students who went through the entire course, whereas there were 54 occasional students who attended some one or two of the subjects.

3626. Do you consider that such industrial education as is given or may be given in Dublin should be entrusted to a private society?—I do not; I think that public opinion is against Government entrusting money to a private society for such a purpose. I am quite certain of this, that the Government would not be allowed to entrust the management of the school of mines in Jermyn-street, or the schools at South Kensington, to the Society of Arts, which is quite comparable, in the respectability of its members and its long existence, to the Royal Dublin Society. They could not necessarily have that control which is requisite in order to see that the money is well and judiciously expended.

3627. Do you consider that such a delegation would be opposed to public opinion?—Yes.

3628. Besides its being opposed to public opinion, would you think that such a course would be attended with any disadvantage to the students themselves?—Certainly.

3629. Upon what ground?—They would not have the same chance of obtaining Government appointments as they would have if it were a Government school. If the Government retained the Jermyn-street school in London, and they handed over the Dublin school to a private society, there is no question that they would give all their appointments to the students in the school of mines in Jermyn-street.

3630. Is there not competition for such appointments?—There is not.

3631. What appointments do you specially allude to?—For instance, one of the students at the school of mines has been appointed to the Mint at Sidney, two or three have been employed on the geological survey in India, another superintends the geological survey of Tasmania, another has been appointed on the geological survey of Great Britain, another has been made director of the geological survey of Trinidad, and another assistant to the geological survey of New Zealand. Applications are made frequently, also, as I have seen stated in the report of the school of mines, by gentlemen in public employments, but not exactly connected with the Government, for young men from the school of mines. Now I think they would always make application to a Government school rather than to a private school for such young men.

3632. Is your objection confined altogether to the question of Government and other situations?—Not entirely; I think it is more likely that a more efficient system of instruction would be carried out in a school which has only that one object than in any private society which undertakes so many. For instance, the Royal Dublin Society may be said to embrace the functions of the following institutions in England; the Royal Institution of Great Britain, the British Museum, the School of Art at South Kensington, Kew Gardens, and the Society of Arts. It is perfectly impossible for a society embracing so many objects to carry them all out efficiently.

3633. It embraces too large a scope?—Yes; its sphere is too wide.

3634. You think that the students would be disadvantageously placed under a society that has such multifarious avocations, as compared with an institution entirely devoted to scientific and industrial education?—Yes.

3635. Are you aware of any very satisfactory results having been derived from the teaching of the Royal Dublin Society in past times?—I am not aware of any.

3636. What is your opinion with regard to the lectures in general; first of all, as to the free lectures, are you favourable to free popular lectures?—No, I am opposed to them. I am so far opposed to them that, though Professor Playfair stated to me, at the time of my appointment, that I would have a right to give at least one course of provincial lectures, yet I did not think I could do any service by going into the country and simply giving nine or ten lectures, and therefore I never made the application.

3637. Do your objections to those free lectures extend to the provincial lectures?—Yes.

3638. Will you state to the Committee your objections to the provincial lectures?—No results can be shown to have followed from the system of free lectures in the provinces; and no results having followed, I do not think that the State should engage in anything that is not reproductive, and which does not contribute to the advancement of the country.

3639. When you say no results have followed, do you mean that there are no individuals that you are aware of who have derived any great benefit from those lectures?—The mere fact that people state that they have derived benefit from the lectures is no proof to me. From the teaching of Mr. Dowling's classes positive results can be shown. Two of the young men obtained scholarships. They came to the school of mines in London; they entered Professor Hofmann's laboratory; at the close of the first year they passed an examination, and one of them got a scholarship, I think, of 15 *l.* or 20 *l.* a-year, and immediately afterwards Professor Hofmann considered him sufficiently advanced in chemistry to make him his second assistant.

3640. Do you not attach any value to those testimonials that have come from different parts of Ireland in favour of the lecture system?—I believe the gentlemen who write those testimonials believe fully what they state, but as they are not practically conversant with educational matters, I do not think they are the persons most competent to judge in the matter.

3641. Do you not think that those provincial lectures are calculated to awaken the attention of the people to scientific pursuits?—I do not think that that is required at all; persons study in schools of science, especially in chemical schools, now with as definite an aim as people in the universities study classics and mathematics. It is not required that a lecturer should go round to endeavour to develope a taste for classics or mathematics,

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thematics, and I think it is equally unnecessary to provide such a system for the purpose of developing a taste for science.

3642. With regard to the Dublin lectures, do you think the lecturers have laboured under disadvantages?—Yes. My course has been confined exclusively to the Museum of Irish Industry; but certainly those lecturers who have been obliged to lecture at the two places must have laboured under great disadvantages, in having to deliver a part of a course or an entire course in one place, and a part of the course or another entire course in another place. You require to have unity and sequence in a course of instruction, and that can never take place if you have the courses divided between the two institutions.

3643. What is the amount spent in prizes at the Museum of Irish Industry?—Fifty pounds a-year.

3644. Do you object to the system of prizes that are given?—Yes; and that reminds me of another very great disadvantage that arises from this division. At the present time, the fees for lectures are very small, and the money prizes are comparatively large; and the consequence is, that a great many of the young men are beginning to attend the courses in the two places, rather for the sake of the prizes than for the instruction. If the Museum of Irish Industry were continued, and they were still to charge only the small fee of 3 *s.* 6 *d.* for the lectures, I would propose to diminish the prize fund by 25 *l.* a-year, and I would devote the 25 *l.* to a scholarship tenable for one year for the following purpose. At the present time, the students who come to these schools of science come very badly prepared; so that, in order to lay a foundation for our instruction, we have to commence with the A B C of science. I would therefore institute a non-compulsory entrance examination in chemistry and natural philosophy, and give to the student who passed the best examination 25 *l.* a-year, on condition that he studied theoretical and practical chemistry and natural philosophy in the institution during the year.

3645. I gather that you are decidedly of opinion that many students are beginning to attend the courses at both places rather for the sake of the prizes than for the sake of the instruction?—Yes, that is the case, especially with the young students.

3646. If the Museum of Irish Industry should be continued as a school of science, are there any alterations in its constitution which you would suggest?—Yes; I think, in the management, we should follow the plan adopted in the Queen's Colleges, in the school of mines in Jermyn-street, in the College of Surgeons in Ireland, and in most other educational institutions, namely, that the director and the scientific officers should form a council which should meet at least once a fortnight for the general management and the carrying out of the educational arrangements, a record of our proceedings being kept.

3647. What is the state of things at the present moment at the Museum of Irish Industry in that respect?—We only meet twice in the year. We meet in order to arrange about the examinations; and we meet again to make arrangements for the programme. The consequence is, that we have no opportunity of exchanging opinions with regard to the advancement and improvement of the institution and its educational system. Very great advantages would arise from our meeting once a fortnight.

3648. In order to discuss the general plan of education?—Yes; and such a council as that which I propose has been recommended by the Public School Commissioners as the governing body in the public schools.

3649. Would you, as a general rule, take all students who came, whether acquainted or not with the rudimentary elements of science, or would you impose a certain test?—I would have a non-compulsory entrance examination in chemistry and natural philosophy, in order to endeavour to make the students come up better prepared than at present; and I would give to the student that passed the best examination 25 *l.* for the first year on the conditions I have named. They cannot, even in the Jermyn-street institution (and they are more favourably situated than we are) turn any students away for the want of that preliminary knowledge. If they did they would have to turn away almost all who presented themselves.

3650. You would give to a student who passed the best examination on entering a scholarship for the first year?—Yes, at the commencement of the course; and I would give at the end of the first year a scholarship of 25 *l.* to the student who passed the best examination in theoretical and practical chemistry and natural philosophy. At the end of the second year, I would give a similar scholarship, tenable for a year, to the student who passed the best examination in zoology, botany, and geology. I would give these scholarships only to *bonâ fide* students of the museum.

3651. That would involve a certain increase of grant of public money, would it not?—No; by an alteration in the distribution of the funds there is sufficient money already to meet it.

3652. What is the number of students attending the practical chemistry class?—There are three laboratory sessions, of three months each, in a general session of nine months. In this session I have had, on the average, eight day students in each of the three sessions; and I have had about 34 in the evening class; so that, taking the three sessions together, I have had 127 students. That is the way they count them at Jermyn-street.

3653. That is not 127 different persons?—No.

3654. What is the actual work which those young men do in the laboratory?—If they are sufficiently advanced, they commence with qualitative analysis; if not, I take them through a book I published some time ago, which I have called "The First Step." That makes them fully acquainted with the language of the science, and with the conditions under which chemical combination and decomposition takes place. After having gone through that, they are fit to go into qualitative analyses; and then, when they are sufficiently advanced in qualitative analyses, they enter on quantitative analyses; and when they are sufficiently advanced in quantitative analyses, they commence original research.

3655. Have they published any researches?—Yes, I have a list of them here: "On the separation of copper and iron by ammonia and the analyses of some Irish copper ores. On a new test for potash. On the deportment of phosphate of sesquioxide of chromium with ammonia and other re-agents. Composition of linseed and rape cakes selling in the Dublin Market 1859. On the solubility of bone earth from various sources, in solutions

solutions of chloride of ammonium and common salt. On the action of air on the alkaline arsenities. On the estimation of tannin in some tanning materials. On the feeding value of rape cake. On the composition and feeding value of Indian corn and some other cereals. Analyses of the specimens of iron, lead, and copper ores in the museum galleries. On Mene's method for estimating silver in argentiferous galena. Estimation of ammonia in the solid and liquid refuse of tanyards. On the comparative value of the different feeding substances for horses. Analyses of crinoidal limestone from Athboy. On the solubility of granite in solutions of the ammoniacal salts. Analyses of the white limestone of the county of Antrim. On the composition of Dublin porter. Estimation of tannin in some barks from British Guiana. On the amount of tannin in some astringent substances, and the comparative rapidity with which the tannin in several of these substances undergoes decomposition. The composition of a complex cyanide of iron, copper, and potassium. On the quality of the milk supplied to the poor and other districts of Dublin. On the composition of Drogheda ale. Examination of the coals employed in the manufacture of gas. Determination of the absolute heating power and proximate composition of the coal from different Irish coal-fields. Amount of tannin in some astringent substances. Specific gravity of some woods from British Guiana. Composition of crystallised sugar."

3656. Are you an Englishman?—Yes.

3657. What was your occupation before you went to Ireland?—I had been a teacher in various places; I had taught science in a private establishment in Hampshire; I was also connected with the College of Civil Engineers, at Putney; and, previously to that, I had been assistant to Dr. Playfair.

3658. Have you found much aptitude on the part of Irish students in the acquisition of scientific knowledge?—Very great aptitude.

3659. Have any of your pupils obtained situations?—They have. One, at the present time, is manager of the bleaching establishment of the Messrs. Richardson, near Newry. They were so well satisfied with him on a preliminary trial, that they have entered into an engagement with him for five years. Another, who came to London last summer, was first engaged in the very difficult task of examining into the volatility and other properties of essential oils. After that he was consulted by some commercial men with regard to the manufacture of glucose, and he made a report to them, which they were so well satisfied with that they paid him double his charge for the important assistance which he had rendered them. They then stated that they would undertake the manufacture of this glucose, and they offered him the managership of it, which he accepted. Another, at the present time, is assistant to Professor Way in London. Another came up and obtained an appointment in the Excise Laboratory in London, from the knowledge he had received in the museum. Since that time he has been appointed assistant in the Excise Laboratory, and, I believe, has given very great satisfaction. There are other cases equally satisfactory.

3660. Have not great advantages to the country resulted from the study of organic chemistry?—Yes; very great advantages have resulted from the study of organic chemistry in the College of Chemistry. The beautiful dyes now manufactured from coal-tar are due solely to the results of the investigations carried out in the College of Chemistry. The first who commenced those investigations was the late Mr. Mansfield, who made the discovery that benzole was present to a large extent in coal-tar; afterwards Mr. Perkins discovered the magenta dye, and Mr. Medlock and others then made what are termed the roseine compounds. Two or three of my friends who were students with me at the College of Chemistry are now deriving a very large income from the manufacture of those compounds. There are a great many other persons besides those two or three gentlemen engaged in that manufacture at present; in fact, it is becoming a most extensive one. That shows what I stated before, that with every alteration and every progress in science the state of industry is altered; those dyes could be as well manufactured in any part of Ireland as they are in England.

3661. Are you desirous of extending the advantages of your laboratory, as regards the study of organic chemistry?—Yes. The great difficulty in teaching organic chemistry has been this, there has been no system of instruction pursued similar to the course we follow in teaching inorganic chemistry; the only way we had of teaching it was by placing before a young man some organic body, and pointing out to him that if he operated upon it in a certain direction, he ought to obtain a certain result. This is a long and laborious process, and may occupy, in fact, years. I have lately published a plan which I think will enable one to teach organic chemistry as successfully as inorganic chemistry is taught at the present time; if this should prove to be the case it will be attended with very beneficial results; for it will enable even evening students to become practically acquainted with organic chemistry; thus materially increasing his chemical knowledge, and therefore making him still more fitted for entering upon industrial pursuits. There is a very curious thing going forward in Dublin, at the present time, showing that the young men in Ireland want such knowledge. A gentleman from Lancaster has purchased the coal tar from one of the gasworks in Dublin, and is at the present moment carrying on the distillation in Dublin, I believe with great benefit to himself. He is able to send over to Dublin persons to conduct that operation, and yet to make a large profit; now, if any one on the spot could undertake the same thing, of course the profit must be still more increased; and it would be a greater advantage to the neighbourhood.

3662. Do you require any additional assistance in your laboratory?—No. There is one point upon which I wish to make a little explanation. When I entered into the arrangement with the Government, I undertook to teach the practical class in the evening, two months of the year; instead of that, I have always given them a full nine months' course. If I take 1863, you will understand what I have done. I gave, in that year, 163 day lessons; I also gave, in addition, 128 evening lessons. Of course it becomes very laborious to me and also to the assistant chemist; and I should like very much not only to have his salary placed in the estimates, as was the case up to 1860, and as is done with regard to the assistants in the school of mines, both in the metallurgical department and the College of Chemistry; but also

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also I should like very much that he should undertake the teaching of the junior students in the evening class, having the benefit of the fees. That, of course, would diminish my income, which is not very large; and it might be a question for the Government to consider whether the salary of the office which I hold should not be placed on an equality with the corresponding office in the Jermyn-street school. But there is another point which I would like to direct the attention of the Committee to, namely the advantage that would arise from teaching natural philosophy in a practical manner; the great impetus that has been given to the study of chemistry is due to the system of practical instruction which Liebig developed, as I have previously stated; and I believe it would be very advantageous to our students if the lectures that are delivered on natural philosophy in the Museum of Irish Industry were supplemented by practical instruction; and I do not think that any addition to the grant would be required for this purpose.

3663. Is that the system pursued in the German universities?—Yes.

3664. Could you accomplish that object without an increase of the grant?—Yes; by economising in other directions, I would spend less on some things in order to expend more upon the scientific instruction. At the present time (I can speak for myself, and no doubt the other scientific officers will bear me out) we have, as regards one item of our expenditure, a duty to do which it is difficult for us to perform; that is to say, we (unlike the Royal Dublin Society, the School of Mines, and the Queen's Colleges) have to provide workpeople, such as painters, bricklayers, and carpenters. Now, as the Board of Public Works is the proper Government Department to estimate the cost and execute work of this nature, it would be a great advantage if, instead of our expending that money, it was entrusted to them. Of course, the amount that would be expended each year by them would appear in our estimates, but it would be very much less than it is at present; it would be less owing to a great many circumstances. First of all, each officer would, at the commencement of the year, have to state what he required; whereas, at the present time, the amount appears each year without any estimate having been taken as to what would really be required; it would be productive of economy if we had to state what we required, and the Board of Works made an estimate of the cost.

3665. How are the different requirements arrived at at the present moment?—Only in this way, when we want anything, no matter at what period of the year, we send a requisition to the director; there is no estimate made at the beginning of the year.

3666. I presume it is the aggregate amount of your requirements for which the director sends in an estimate?—There has been no estimate taken before the estimate is sent in.

3667. Do you think that the Board of Works would do the work cheaper?—I do; and it would relieve us from a great deal of difficulty; we are engaged only for scientific purposes, and I think it would be much better if that, which is no part of our proper work, could be carried on by the Board of Works.

3668. You think that there would be a saving in such an arrangement?—I do. I find, from returns obtained by Mr. Hamilton and Mr. Waldron, that we have had a larger average expenditure on the furniture and fittings during the last nine years than during the previous nine years, when the museum was in course of fitting up. The average expenditure on furniture and fittings for the first nine years (1846 to 1855) was 482*l.*; whereas the average expenditure on the same items for the last nine years (1855 to 1864) has been 529*l.*

3669. How has that arisen?—I do not know; but it is the best proof that this item ought to be entrusted to the Board of Works.

3670. Is it from additional cases being required?—It cannot be from that, because every time we get books or specimens we do not require further increase in cases.

3671. You think that there might be a saving first of all with regard to the mode in which those things are obtained; and, secondly, in the actual furnishing and equipment of the museum itself?—Yes; and, with the amount thus saved, the expense of the improvements in the teaching I have suggested could well be defrayed.

3672. Should you propose to make any alterations as regards the staff of the museum, by way of economy?—No, not as regards the staff of the museum; but I think it would be an advantage, and would tend greatly to economy, if the museum were closed one day in the week, to allow the porters to clean the place on that day. The curator would also have an advantage by having a close day, inasmuch as he would be better able to make any alterations in the cases that he required.

3673. There is an increase, is there not, in servants' wages since the establishment of the museum up to the present time?—There is a very large increase in the cost of women servants; it has increased from 30*l.*, in 1852, to 110*l.*, in 1864; and I think it might be brought back to its original amount if the museum was closed one day in the week for the porters to clean it.

3674. What is the reason of that; is it that there are more servants employed?—I am not prepared to state.

3675. As to the item under the head of "incidents," how much is that?—£. 200 a-year.

3676. How is that fund applied?—£.100 a-year goes to pay the assistant chemist; and I think that item ought to appear under its proper head.

3677. The incidents would thereby be diminished by 100*l.*?—Yes; and as each department has a certain grant, I would make that department keep within its grant; I would not have any incidental expenses arising from the different departments.

3678. You said that you thought there would be more chance of situations being got by students in a Government institution than by students in a private institution; is there any difference in regard to giving situations to students in the schools of mines in Jermyn-street and to students in your establishment in Ireland?—The Government, so far as I am aware, have never given any employment to the students in the Museum of Irish Industry. They give situations on the geological survey, both at home and in the colonies, to students in the Jermyn-street Museum; and also they obtain other appointments through the Government; but never yet, so far as I am aware, have they given any employment to students in the Museum of Irish Industry.

3679. Both being Government institutions, why should there be any difference between them?—I think there ought not to be any.

3680. Have

3680. Have you any opinion as to the advisability of conferring degrees in science at the Queen's University?—I think it advisable that the Queen's University, or some other body of that kind, should grant a degree in science, and allow our students to go up for that degree; but I would not have what is required in the London University, matriculation examination for this degree. In the London University they require an acquaintance with Latin and Greek; I would have the two modern languages, German and French, in their place.

3681. That you think would be a considerable advantage in the cause of scientific education?—It would; and it would give a status to industrial education, which, I think, is desirable.

3682. Is there any other point upon which you would like to make any suggestion to the Committee?—I think the officers in all those different institutions which are under the Department of Science and Art ought to be promoted, just as in other Government departments, in order to give a healthy stimulus to the officers, and encourage them to do their duty. At present it does not appear to be the case.

3683. Sir *Edward Grogan.*] If I understood you rightly, you proposed that by saving some of the money now given in prizes, you might establish a scholarship?—Yes.

3684. What would you propose to cut off from the prizes?—There is 50 *l.* at present given in the Museum of Irish Industry in prizes; instead of giving 50 *l.* in prizes, I would diminish that by 25 *l.*, and establish a scholarship for a year, to be given to the person who passed the best examination in the non-compulsory entrance examination.

3685. The initiatory examination?—Yes.

3686. Mr. *Dillwyn.*] The matriculation examination?—Yes.

3687. Sir *Edward Grogan.*] Would you attach any condition that such scholarship should not be given to a student who had won previous prizes; you stated that some young men became students for the sole purpose of carrying off the prizes; if you gave so large a premium as 25 *l.* for successful matriculation, would not the evil you anticipate arise?—I think not.

3688. Would not a student go in for that matriculation examination who had been studying in other schools, not with a view of taking up scientific pursuits as his career, but solely for the sake of that one year getting 25 *l.*?—No; I do not think that he would have been studying in other schools for that purpose. I would not give 25 *l.* to any person who simply passed that examination; but I would attach this condition to it, that he attended the course in theoretical and practical chemistry and natural philosophy in the museum during the year, so that he would not be able to attend any other course.

3689. You would impose that condition upon his receipt of the scholarship; not paying money till the end of the year?—Yes.

3690. You stated that no results had, as far as your knowledge extended, resulted from the provincial lectures; I believe one of your own colleagues, Professor Sullivan, stated that his attention was first turned to scientific pursuits from a provincial lecture?—I distinguish between a taste for science and actual results, in the way of a student either obtaining a situation from that teaching or getting some employment in consequence of it.

3691. Professor Sullivan stated that, in his case, his attention was first directed to scientific pursuits by a lecture in the provinces; the result being that he is now a professor in this establishment?—I stated that I do not think it is the business of the State to create a taste for science; I think that taste is created in other ways.

3692. Is not his case as much a result from scientific teaching, commencing with a provincial lecture, as any one case you have alluded to?—He did not get that education that fitted him for the position he now occupies from a provincial lecture; he studied in Germany under Professor Liebig, a very long time.

3693. We also had in evidence from Dr. Steele, that his attention was similarly directed to scientific pursuits by a lecture?—I do not think that it is the business of the State to give lectures in order to create a taste for science; at the present time industrial science is in a different condition to what it was 15 or 20 years ago. It is now almost universally extended; and I do not think that it is the business of the State to create a taste for science; it might as well undertake to create a taste for classics or mathematics.

3694. Are you going on the assumption of the success of science schools?—I think that science schools are better than lectures; I would not advocate the withdrawal of the grant of 500 *l.*, which is at present devoted to lectures, but I would rather expend it in giving assistance to science teachers than give it to gentlemen for a course of 9 or 10 lectures.

3695. Mr. *Waldron.*] You propose to take away half the amount at present expended in prizes, and devote to another purpose; would not that be too much to take away?—What should be the amount is a question for consideration, but I do not think that it would be a disproportion, because at the present time, at each course of lectures, there is 8 *l.* given in prizes. The fee is only 3 *s.* 6 *d.*; that is to say, the fee for attending the lectures is 3 *s.* 6 *d.*; it is more for my own classes; it is 2 *l.* for nine months, in the evening class, and 8 *l.* for nine months in the day class.

Lunæ, 13° *die Junii*, 1864.

MEMBERS PRESENT.

Mr. Dillwyn.	Sir Colman O'Loghlen.
Mr. Gregory.	Mr. O'Reilly.
Sir Edward Grogan.	Sir Robert Peel.
Mr. Leader.	Mr. Waldron.
Mr. Lefroy.	Mr. Luke White.

W. H. GREGORY, Esq., in the Chair.

Dr. Steele, recalled; and further Examined.

Dr. *Steele.*
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3696. *Chairman.*] Sir Robert Kane has raised an objection to some evidence that has been given before the Committee on the last occasion, viz., that tickets of admission were sent to him as a Professor of the Museum of Irish Industry for the admission of the students to the library of the Royal Dublin Society; were those tickets sent to him as professor, or simply as a gentleman who is a member of the Royal Dublin Society?—I merely sent them to Sir Robert Kane, knowing that he would have the power of disseminating them amongst the students; and in the letter I wrote to him I mentioned that it was to give him facilities for doing this. I am not aware that he had forms. These were the blank forms to be signed by him.

3697. But as a member of the Royal Dublin Society?—Of course he signed them as a member of that society, and not as a director of the Museum.

3698. No signed tickets were sent to him?—No; nor did I mean to convey that they were. I took it for granted that it was understood that the forms were sent in blank.

3699. And were these forms sent on his own application?—He did not apply to me, but he might have applied to the society, or to the porter, or made some application of that kind. I volunteered sending them.

3700. Do you recollect if Sir Robert Kane made any application to you or to any official of the Royal Dublin Society for those tickets?—I do not think he made any application to me; indeed, I am sure he did not.

3701. Be good enough to state to the Committee why you sent them?—I never heard him make application for them.

3702. But why did you send them?—Because I thought they would be useful to him, and that he would make use of them for the students of the Museum.

3703. Mr. *Waldron.*] It is usual, is it not, to give a certain number of these tickets to the members?—Yes.

3704. Did you send more than the usual number to Sir Robert Kane?—I sent much more than I usually do to any of the other members.

3705. Sir *Colman O'Loghlen.*] It is usual to send those tickets to the members?—I sent about six of these forms when they were first printed. I gave directions to have them sent, and I know several members have got them, and when any member is newly admitted, a package of tickets is enclosed to him, and the member then fills them up in favour of any person whom he wishes to introduce to the library; but in sending the tickets to Sir Robert Kane, I recollect sending him a much larger number than were usually sent to new members.

3706. Sir *Robert Peel.*] Have you any authority to send an unusually large number of tickets to any particular members?—I cannot say there is any distinct authority given to me.

3707. Are not those free admissions to the library?—They cannot be looked upon exactly as free admissions, because the member who signs them is to a certain degree responsible for the respectability of the person admitted.

3708. Have you authority to give a particular member of the Royal Dublin Society a larger number of these free admissions than might fall to the lot of any other member?—I can give any number to any member I consider proper.

3709. Mr. *Dillwyn.*] Sir Robert Kane could only have issued them to professors in his capacity of member of the Royal Dublin Society; he could not issue them to professors to be reissued to students, is that so?—He could not.

3710. Sir *Colman O'Loghlen.*] The tickets were sent to Sir Robert Kane, as a member, and not as a professor?—Yes; and he received more than were usually sent to the others.

3711. *Chairman.*] Can any member have as many as he likes?—As many as he likes. I have now to hand in to the Committee some papers; the first is a map, showing the whole of the society's premises; then a return of the names of students who attended the public lectures on agricultural chemistry.

3712. Would it not be sufficient to put the numbers?—I have the numbers in this paper, which I beg to hand in. Then a paper, giving the size and dimensions of the laboratory; also, a paper containing the proposed curriculum of agricultural education. (*The papers were handed in by the Witness.*)

3713. When

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3713. When was that proposed?—It is about a year since the scheme was adopted, and it was suspended in consequence of a report of the Commissioners.

3714. Has any reference been made to this curriculum?—It has been mentioned, and questions have been asked, I think by Mr. Waldron, as to whether the Society intended to have an agricultural school.

3715. Mr. *Waldron.*] Whether there was a scheme for agricultural instruction in the Society at any time?—There was.

3716. Can you give the Committee any particulars of what that was?—It is shortly described in this paper: "Scheme for issuing agricultural certificates.—The Royal Dublin Society, in its desire to advance the knowledge of scientific and practical agriculture in Ireland, will confer certificates in agriculture upon all persons presenting themselves for examination, who have undergone the subjoined course of agricultural education, and whose answering at such examination held by a Board of Examiners appointed by the Royal Dublin Society shall be considered satisfactory." Proposed Curriculum of Agricultural Education: 1. Attendance for at least two years on practical farming in an agricultural school, or on a farm of not less than 100 acres of tillage, recognised by the Agricultural Committee of the Royal Dublin Society. 2. Attendance on a course of lectures on the theory and practice of agriculture. 3. Attendance on a course of lectures on agricultural chemistry; also working practically for some time in the laboratory of the Royal Dublin Society, or other recognised school, at the analysis of soils, manures, and agricultural produce. 4. Attendance on a course of lectures on physics, embracing heat and mechanics. 5. Attendance on a course of lectures on botany, as applied to agriculture. 6. Attendance on a course of lectures on the diseases and treatment of horses, horned cattle, sheep, swine, and other domesticated animals; together with six months' attendance upon an hospital where such diseases are treated. 7. The Society reserves to itself the power of dispensing with any part of the curriculum in favour of persons who have otherwise acquired lengthened experience in practical agriculture. Candidates, on producing certificates of attendance on the above courses, extending over a period of at least two years, will then be admitted to examination for the agricultural certificate. In addition to the above subjects, the examination will include arithmetic and farm accounts; and those whose answering is of a sufficiently high order, will receive, besides the usual certificates, honorary prizes or medals." Then there is this memorial. I do not know whether the Committee think it desirable to put it in?

Dr. John Morgan, called in; and Examined.

Dr. *J. Morgan.*

3717. *Chairman.*] Dr. Morgan, I believe you are Professor of Zoology?—I am acting Professor at the Museum of Irish Industry.

3718. And you have lectured on Zoology, have you not?—Yes, for the past session, and half the previous one.

3719. Under the Committee of Lectures?—Under the direction of Sir Robert Kane.

3720. You are also Professor of Anatomy at the Royal College of Surgeons in Ireland?—Yes.

3721. And I think your professorship is one of those which it is intended should be suppressed according to the report of the Commissioners of 1862?—Yes.

3722. Do you consider that there is much interest taken in zoological studies in Ireland?—Judging from the attendance, I should say a very great interest; the attendance is very large, as I think you will see by the return.

3723. When you say "attendance," do you mean attendance at the zoological lectures?—Yes; there was an average of 154 at each.

3724. When?—During this session.

3725. What is that compared with the previous session?—I think it is one-third over the previous session, if not more.

3726. So that I gather from what you state, that there is a continual increase in the numbers of the persons attending the lectures?—That is so, according to my experience.

3727. Is your course of lectures a complete one?—No; it is only for half the course.

3728. Is that because your professorship is divided with the professorship of Botany?—Yes.

3729. And you have found that the examination papers have been answered in a very creditable manner by the students?—Extremely so.

3730. Are you a member of the Royal Dublin Society?—Yes, and I have been a member for some years.

3731. And being a professor, you are acquainted with the nature of the Museum of Irish Industry?—I am.

3732. Do you consider that it would be in accordance with public interests that the Museum of Irish Industry should be suppressed, or that it should be amalgamated with the Royal Dublin Society?—Certainly not suppressed, and I should say not amalgamated either.

3733. Do you attach great importance to the fact that the Museum of Irish Industry is under one scientific head, responsible to the Government?—Certainly.

3734. Do you object to the fluctuating character of the Council in the Royal Dublin Society, which may vary in its policy one year from another?—That is the objection.

3735. The great objection?—Yes.

3736. Do you object to that as a member of the society, or as a lecturer?—As a lecturer. The difficulty is to get proper persons on the Committee for electing professors and regulating the lectures.

3737. As a professor, have you found any difficulty in delivering a course of lectures in conformity with the views of such a mixed body as you describe, consisting of amateurs and those not especially informed on the subject?—I cannot say that I have practically found any difficulty, but the lectures delivered before the Royal Dublin Society are not delivered to the same kind of audience that we have at the Museum. I delivered one set of lectures at the Royal Dublin Society, and the other at the Museum.

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3738. The difficulty in your mind is this, that you are delivering one portion of a course of lectures at the Royal Dublin Society, and the more advanced part of the course at the Museum?—We have a different audience, and must suit the lecture to the audience; I do not say a more advanced course, but that one is more popular than the other.

3739. What is the nature of the audience at the Royal Dublin Society's lectures?—They are amateurs, to some extent. Some of them are member's sons, I apprehend; they appear to be so. They are young lads; boys, perhaps, coming from school. I have seen some ladies there, I believe from ladies' schools, but I cannot be certain, as I did not come directly into communication with them.

3740. It does not appear to you that the lectures are attended by the class intended by the Government?—No; nor by the same class that attend the lectures at the Museum. Perhaps I may suggest one way of explaining it. The hour of four o'clock would not suit some people. The Royal Dublin Society's lectures are given at four, and the others are given at eight; of course, those who attend at eight could not attend at four.

3741. I suppose the hour of eight is more convenient for the working people?—So I apprehend; they are the section intended to be benefited.

3742. Have you found any practical difficulty to arise in the delivery of a course of lectures, from your commencing the popular style, and then going on or continuing the lectures in a more scientific style?—The course of lectures being so very short, it is, of course, of necessity that that must be done. If the course were extended, some of the same ground might be gone over again; but the limited nature of the course of lectures renders the course I have described necessary.

3743. Is there anything in the circumstances of Ireland that renders it expedient that the technical and scientific instruction given in that country at the expense of the State should be entrusted to a body of private gentlemen rather than to a scientific institution?—I do not think so. I think that the Scientific Institution will be preferable; though the other body may take a great interest in the advancement of the country.

3744. Would you go so far as to relieve the Royal Dublin Society of the educational functions for which it is not specially fitted?—Having a museum there, there would be some benefit from having some of the lectures, or there would be some convenience in the way of obtaining specimens from the museum. The museum of the society is valuable, in some respects, for the purpose of illustrating a lecture; not so valuable as might at first sight appear.

3745. My question is not so much as to the place in which the educational functions are carried on, as to the management of them; would you place any of them in any way under the direction of the Royal Society of Dublin?—Certainly not; on account of its fluctuating nature.

3746. Would you make an exception as regards a veterinary school?—As far as I understand the subject, I think not. I think that I should leave that also.

3747. I daresay you are of opinion that the Exhibitional Department of the Royal Dublin Society should be liberally supported by the Government, and that they are a valuable body as regards exhibitional purposes?—Certainly; and agricultural purposes, to some extent.

3748. You would be disposed to advocate liberality of treatment towards the Botanical Gardens?—Yes.

3749. And also towards the Museum of Natural History?—Yes.

3750. And towards the library?—Yes, for purposes of reference.

3751. With regard to the library, you are aware that the members of the Royal Dublin Society have certain special privileges as to the power of taking out books?—Yes.

3752. And are you of opinion that those privileges should be maintained?—I would continue those privileges, but only as to the members.

3753. But inasmuch as the library is almost considered to be supported entirely by the Government; that is, 930 *l.* in each year is the amount supplied by the Government independent of the sums advanced by the Board of Work, and as 60 *l.* is the amount of private subscription, do you not conceive that the library assumes the complexion of a public library?—Unquestionably on this ground; but the right is so small that it is hardly worth denying.

3754. You do not think that this privilege of taking books out interferes with the convenience of the public?—As far as I can judge, not. It is not abused, and it is not much used.

3755. I think you stated in a former answer that you are in favour of the continuance of the Museum of Irish Industry?—Certainly.

3756. Would you place it on the same basis as the museum in Jermyn-street, or would you extend its functions and make it more of an industrial school of instruction?—Certainly; an industrial school, in fact, on an improved basis.

3757. With regard to the lectures you have spoken of (the Dublin lectures), are you in favour of free lectures?—That is a point on which, in my own mind, I have a difficulty in arriving at a conclusion. There are certain difficulties on both sides; but for the classes intended to be benefited the free lectures should be continued.

3758. What classes do you mean?—Artisans, and those unable to pay a fee which would be worth naming. You must charge a fee which is very small or else a large fee.

3759. Do you not think that the imposition of a small fee makes men more particular in their attendance, they regarding the lectures as something they have invested their money in, and consequently they are more disposed to pay attention to them than if they were simply to make them a lounge, free of charge?—That is quite the case; but as far as my free lectures go, I have never found the slightest difficulty or interruption.

3760. You attach importance, do you not, to having a number of persons present for the purposes of study, rather than a number attending for amusement?—Certainly. I would rather have real students than *dilettanti*.

3761. And do you not think that a small fee would be more likely to gain the end to which I have alluded?—I could not speak decidedly on that point, for in Dublin, really it is a difficult point to decide whether to charge a small fee or a large one, or none at all. My own impression is, that I would admit them for nothing. I prefer

fer admitting for nothing, or charging a fee of a sovereign or thirty shillings.

3762. Mr. *O'Reilly.*] For the course?—For the course.

3763. *Chairman.*] As you were not disposed to continue educational functions to the Royal Dublin Society, I presume you are of opinion that all systematic instruction should be followed by examinations and prizes or certificates of competency given under the direction of one officer responsible to the Government?—Yes.

3764. I want to ask you about the provincial lectures. Are you in favour of them?—I have never given a course of provincial lectures but I am convinced that the principle is a useful one.

3765. Are you a member of any other scientific societies in Dublin?—I am a member of the Zoological Society, and nearly all the others.

3766. And the Royal Irish Academy?—I am not a member of that?

3767. Do you believe that there is any desire on the part of those scientific societies, which are subsidised by the State, that all parliamentary grants in aid of scientific societies in Dublin should be included in that of the Royal Dublin Society, inasmuch as the council of that society would have an opportunity of making the representations which the circumstances of the time might render proper with reference to them?—I am not prepared to express an opinion.

3768. Mr. *Waldron.*] You said that most of those whom you observed attending lectures were amateurs?—So I should say. Of course, I have no personal knowledge.

3769. And amongst them there were some schoolboys?—Apparently so.

3770. Do you not think it likely that they went there for instruction more than for amusement?—I should hope they did.

3771. I collected from your evidence that you thought they went there merely for amusement, by your calling them amateurs?—I meant the grown-up audience would be more or less amateurs.

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3772. Is it not likely that young men at that time of life, engaged in other studies, would acquire a taste for different matters from attending the lectures?—No doubt; and probably they did so. The only question is, whether that is the body you intend to benefit.

3773. Although there are a number of persons distinguished in literature and science on the council, you think there are too many who are not so distinguished, to allow it to be useful as a body conducting education?—I think it would be liable to abuses or mistakes possibly on account of its conflicting nature. That is the only objection I have.

3774. Do you think that the artizan classes would not be benefited by the lectures?—My own individual opinion would be not to have them there. I know others who say they should be there. It is so small a thing that I do not think it influences them.

3775. Are you aware that in the report of the Royal Dublin Society for 1836 it is stated that the trial was made of requiring payment for attendance at the lectures, and that after some time it was found to work so injuriously that the society changed the rule?—I am not aware of it. I cannot say I am aware of a fact so far back. It is a very difficult point to determine.

3776. Sir *Colman O'Loghlen.*] Did you state that the privilege of taking out books was the only privilege the members had in connection with the library?—As I recollect it.

3777. Is it not the fact that all new books lay a month in a room adjoining the library?—Yes.

3778. And have not the members the privilege of reading them?—Yes; but I think they are the magazines, periodicals, and so on.

3779. All the magazines and all the new books are there for a month?—All the magazines; but I do not often read them.

Dr. E. Perceval Wright, called in; and Examined.

3780. *Chairman.*] You are, I think, Professor of Natural History in the University of Dublin?—I am Professor of Zoology.

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3781. You are, I believe, a Fellow of the University?—I am not; I am a Doctor of Medicine, and a Member of the Senate.

3782. And a Member of the Royal Dublin Society?—Yes.

3783. And one of the Library Committee?—Yes.

3784. Are you on the Natural History Committee?—I am not now; but I have been.

3785. Have you taken much interest in the subject of the library of the Royal Dublin Society?—Yes; in the library and other departments, for many years.

3786. Have you taken special interest in the question of the library?—Yes, I have, of late years.

3787. How was the library founded originally?—According to a report given into the society by an Act of Parliament. I have the report, which, I believe, goes into the matter correctly, and, if you have no objection, I will read you two or three lines: "The origin of the library may be traced similarly as follows: the botanic garden, the drawing schools, and the museum of natural history having been used as educational establishments, books were required for the use of the teachers and students generally; and Parliament again approving of its establishment, voted an annual sum for the library, including the salary of the librarian. It is hence to be inferred that these five separate institutions, namely, the museum, school of art, botanic garden, laboratory, library, with their separate staff of professors, masters, and attendants are so many distinct public institutions, but are placed by the Legislature in the hands of the Royal Dublin Society."

3788. Sir *Edward Grogan.*] What are you quoting from?—From a report handed in to the society in July 1862, signed, "Richard Griffiths, Bart., John R. D'Olier, E. Senior, T. J. Sidney, LL.D."

3389. *Chairman.*] What is the present constitution and management of the library?—It is at present managed by a committee of 11 and a librarian.

3790. Are you satisfied with the manner in which the selection and purchase of books is carried on?—The books are selected thus: first of all,

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all, any member can recommend any book to the library committee, and the committee use their own discretion in paying attention to the recommendation. In the next place, the committee select books sent in by the booksellers of the society from time to time. Of course, in the selection, the library committee must consult the interests of the members as well as the public interest, but I think that the interests of the public are very largely attended to.

3791. Have you any objection to the mode in which this selection is carried on at present?—No; with the exception that a large number of books selected must suit the present wishes of the members, the library being, to a large extent, a lending library.

3792. And because it is a lending library, you think that there may be certain objections to the selection of the books?—I do. It being a lending library, necessitates the selection of certain volumes which would not otherwise be selected.

3793. Do you object to the principle of lending books from a public library of this description?—That is rather a difficult question. It being a public library in Dublin, and there being no other public libraries in any of the provincial towns, I think that the books should not be lent; but if there were libraries in the provincial towns, as there are in Germany, there would not be the same necessity to insist on that. For instance: in Berlin I have used extensively the Royal Library; but then there are other provincial towns in Prussia where there are libraries, and they lend books, so that people have not to go to Berlin to consult books. I have known instances of professors, especially from Galway and Cork, who have come up to Dublin to consult the books, and have experienced great inconvenience from the books which they required, and which they saw in the catalogue, not being in the library.

3794. Mr. *O'Reilly.*] Have you known instances of that yourself?—From time to time, I have known several instances.

3795. *Chariman.*] As far as you are aware, are there many books lent at a time?—About four weeks ago, I estimated the number of works, or parts of works, at between 500 and 507; and I think that was a fair average, for it was a month in which there were a fair number of days in which members could take out books.

3796. And you think it a great grievance to people from the country, who wish to examine the books, that they should be lent out?—Yes; and even to those in Dublin who wish to consult the books.

3797. Are books of reference generally selected?—That depends very much on what the members are working at. If they are on scientific questions, they borrow books of reference constantly; but at the same time it is difficult to say what a book of reference is. When I say books of reference, I allude to parts of scientific periodicals continued for years. These might be considered books of reference by some, and not by others.

3798. Have you ever known instances in Dublin, where a series of books that would be ordinarily resorted to have been taken out by individuals, and kept, not merely for their own use, but the use of persons associated with them?—From time to time, many such cases are reported, where books have been borrowed out for instruction. In one case, I recollect books were borrowed for the instruction of a class, in college. The borrower was what we call a "grinder," engaged in teaching.

3799. And he took a series of books from the library for teaching his class?—Until it was found out.

3800. Although this arrangement may be a good act for subscribers in Dublin, do you think it is extremely inconvenient for country subscribers who may wish to come up and have access to the books?—Yes, and very much more so for persons not subscribing, and even in some instances for people in Dublin. Not a week ago, a gentleman engaged upon a subject of interest with me could not find two particular volumes in the library, for they were lent out.

3801. Dublin has no public library except this one of the Royal Dublin Society?—No true public library.

3802. I presume that you look on this library as a public library from the manner in which it is supported by the Government and the small amount of private subscriptions given to it?—I would rather say that I think it ought to be a public library, but my impression is that it is not yet altogether a public library. I think that it is supported altogether by the Government, but the people have not altogether the use of it.

3803. Then, you think that it ought to be essentially a public library and for the benefit of the public?—Yes.

3804. And you are aware that 900*l.* is paid by the Government, whereas 63*l.* is the whole amount of private subscription?—At the same time, by a different arrangement of the accounts, one might say that the whole amount is paid by the Government.

3805. You think that the 63*l.* is a part allocation to enable the members to have special privilege for themselves?—One might look on it in that point of view; but I would rather regard it as a library supported by public grant.

3806. It has been stated by some witnesses that this practice of lending out books is analogous to what is called the "putting aside" system at the British Museum. That is, a reader at the British Museum may have certain books put aside for him. Would other readers have the same inconvenience in that case, from non-access to the books, that persons have in Dublin from the books being in the hands of members?—No; when a member borrows a book, he keeps it for a fortnight or a month; and when a book is put aside at the British Museum, you must give it up the moment it is wanted. I have been studying in the zoological department with half-a-dozen books by my side, and one of the books has been taken away even while I was actually engaged in reading it. That was in the British Museum. It was Dr. Gray, the zoological director, who got the books for me.

3807. Mr. Panizzi is the principal librarian, of the British Museum, is he not?—Yes.

3808. Will you read to the Committee this letter from Mr. Panizzi (*handing letter to Witness*)?—It is addressed to Mr. Gregory.

"British Museum,

"My Dear Sir, 13th June 1864.

"Books are put aside from day to day for readers who at the conclusion of their day's work request to have such books as they have not done with, reserved for them; but if any person applies for any volume, so put aside, when not actually

actually in use, the volume is at once transferred from the reader for whom it is put aside to the reader that asks for it. Even when a reader has before him in the reading-room a number of books, and a second reader wants particularly and without delay any of these books, the former reader is applied to and requested to give up to the reader who thus pressingly asks for any volume which he does not actually use at the moment. Officers who happen to have books by them, which they require in the performance of their duties, are obliged to give them up at once when wanted by a reader. There is a register on purpose for these transfers of books from one person to the other. I am surprised to learn that such incorrect statements as you inform me of are circulated.

"Believe me, yours truly,

"*A. Panizzi.*

"W. H. Gregory, Esq., M.P."

3809. Judging from that opinion, I conceive that you are not of opinion that there is any analogy between the practice of putting aside in the British Museum, and lending out in the Royal Dublin Society?—Not the slightest.

3810. With regard to the admissions, are you aware of any steps having been taken by any of the librarians in the Royal Dublin Society to make the library more accessible to the public?—The present librarian had adopted a plan that certainly tended to make the library as useful as it could possibly be made to a large section of the public. Shall I lay that plan before the Committee?

3811. Do so, if you please?—First of all, when a new regiment was sent to Dublin, admissions were sent to the colonel, the president of the mess, and all the officers. When a man-of-war arrived, the same course was pursued; petty officers, and non-commissioned officers also were admitted if recommended by their colonel or captain. It was the same with a clergyman who had the cure of souls. By that I mean a clergyman controlled by a bishop, or the elders or members of his congregation. Parishioners were admitted when they brought a letter signed by the clergyman, and under-graduates from Trinity College on an order from their tutor. At that time the library of the University was not open to under-graduates. This practice was stopped by a bye-law, which "states that the librarian shall not, by virtue of his office, or as a member of the society, if he be one, have the privilege of introducing visitors to the library."

3812. Who is the librarian you allude to?—Mr. Colliss.

3813. When was that resolution passed?—It was adopted by the library committee on the 5th of December 1856, and confirmed by the council on the 11th of December 1856.

3814. Do you think that there are any objections to the librarian having the power of granting admissions?—I see none; but at the same time by his having large powers of admission he did away with one of the great privileges of the members, and it was naturally objected that if a member had a right to introduce, and the officer also had that right, parties would never hunt up the members, but would go to the librarian, because he was always at the library.

3815. Do you not think it is a convenience to go to the librarian instead of hunting up a member?—Yes, and as a fact there were then cornets and corporals reading there, and such men as one does not see now.

3816. With regard to the test of admission, would you be disposed to extend it or confine it to members of the Royal Dublin Society?—I would let any respectable person read in the library. I do not wish you to understand that any respectable person could not get in now, because if he likes to go to some trouble he can.

3817. You would allow members of the Society to give admission?—They have that.

3818. But would you wish that that privilege should be still continued?—Certainly.

3819. Then you would also give the power of admission to the librarian?—I would give power of admission to the librarian and I think it would be of great advantage.

3820. With regard to the applications to be made to the librarian, do you think a recommendation from a couple of householders in Dublin sufficient?—There is a difficulty in that. If it is only in Dublin the librarian might know who were householders and who were not, but in the case of a person from Galway or Cork the librarian cannot be supposed to know who are householders there.

3821. Therefore, you would not have the admission to rest on recommendation of two householders?—I think it might be just as difficult for a person from Galway to get an introduction to a householder in Dublin as to a member of the Royal Dublin Society.

3822. If an application was handed to the librarian from an officiating clergyman of any denomination, would you consider it a good test?—Yes; or if signed by any magistrate of Ireland, who would be known to be such by looking at the list.

3823. Do you consider it a matter of great importance that the librarian should be able at once to act on any proper application?—Certainly; upon his own discretion.

3824. Then I gather from your evidence, with regard to the library, that the present system of lending out books is calculated to be exceedingly inconvenient to persons in the country?—Certainly.

3825. And the privileges, such as they are, are chiefly of use to persons in the town?—The privileges of lending out, certainly.

3826. Mr. *Lefroy.*] If the privilege of reading was extended, would not the privilege of lending out be more objectionable?—I am against that altogether; I am against lending out a single book.

3827. Sir *Colman O'Loghlen.*] At what hour is the Library in Dublin open?—Under the correction of Dr. Steele, I would say from eleven till five, and in the evening.

3828. *Chairman.*] Are you acquainted with the Museum of the Royal Dublin Society?—I am acquainted with it intimately.

3829. That was founded by special Act of Parliament, too?—By special Act of Parliament. The report says: "The origin of the present Museum of Natural History may be similarly traced to Parliament, by Act 32 George 3, chapter 14, an extensive collection, known as the 'Leskean Collection,' was purchased by the same authority, the whole being entrusted to the society; in whose hands, owing to the liberality of Parliament and the extent of private donations, the

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the cabinet grew into the present extensive Museum of Natural History."

3830. Are the collections of fossils extensive?—The palæontological collection is extensive.

3831. Have they any economic collection?—The botanical collection is small, but facilities are given by the botanical garden to enlarge it to a great extent. There are many specimens of economic interest connected with the mineralogical collection; for example, instead of having pieces of iron ore, we have it in its different stages, such as pig-iron, and so on. I think another arrangement of that collection would make it a valuable economic one, and each month adds to its value, in consequence of the presentations that are made.

3832. The Museum of Irish Industry is also economic?—One half consists of the museum of economic zoology, geology, and botany.

3833. The Government, therefore, is subsidising two institutions, which really and practically, though not ostensibly, have the same bearing?—That is my impression, to a very great extent.

3834. Do you think it desirable?—Most undesirable.

3835. To which institution do you think these economic collections should be confined?—I think the economic collections would be more practically valuable along with the general collections. The practical difficulty is whether specimens when presented are to go to the economic or to the general collection; it is hopeless to imagine that if such did go to the Royal Dublin Society they would be sent on to the Industrial Museum.

3836. Why do you say "hopeless"?—As it is at present constituted, there never has been such a transfer; but it would save much Government money if the two museums were in connection one with another.

3837. Do I understand you to say that it is advisable that both collections should be placed under the Royal Dublin Society?—I am strongly of opinion that a public museum ought not to be under any private body; and when I talk of the transfer of the economic museums, I do not talk of its transfer to the Royal Dublin Society, as at present constituted.

3838. What transfer do you contemplate?—A transfer to a national museum, under the direct control of the Government.

3839. Is the museum of the Royal Dublin Society open of an evening?—Never as a museum. The building might have been open on one or two occasions.

3840. Is it desirable that it should be open of an evening?—When it is in order I think it is desirable. At present, perhaps it is not.

3841. Is it much out of order now?—At present it is in a fair state of order, but hardly so interesting to the public as to make it desirable to open it in the evening. The Museum is fairly arranged. It is well floored and partly cased. There are a large number of specimens in it, and the specimens that are there are quite available for study; but it would require additional specimens to make it useful to the public.

3842. With regard to the gardens; are you acquainted with the Botanical Gardens?—I know them, and have constantly visited them.

3843. We have been told that certain private days are set apart for study, and that on those private days which are so set apart for study, members have the right of entering, not only themselves, but of giving admissions to other persons?—They have.

3844. Are the gardens much thronged at that time so set apart for study?—Sufficiently so to do away with the idea of their being private days for study. On a private day for study, in my idea, none should come but those who were studying botany practically. This takes place on Saturdays until two o'clock. Taking the average of Saturday week, more than 200 students were there under charge of their tutors. Students were there from the classes of the professors of botany in the different medical schools, and the Museum of Irish Industry.

3845. When you say that on Saturdays the gardens were set apart till two o'clock, do you mean that the members' admission was suspended?—Members could get in, but, owing to the gardens being open at eight o'clock and closing at two o'clock, there were but few of them.

3846. On the private days would you limit the admission to members, or exclude the members altogether?—I think two days would be sufficient for study, and I would limit it to the students until a certain hour.

3847. Would you not allow members themselves the right of admission, provided they did not extend it to others?—I do not think it would much matter; the members would not go there at 8 o'clock.

3848. Mr. *Lefroy.*] Would you keep up that early hour?—Yes; I think botany appears to be always studied at an early hour.

3849. *Chairman.*] Are you of opinion that it would be injurious to the interests of the public that the Museum of Irish Industry should be suppressed or amalgamated with the Royal Dublin Society?—I think, as an educational body, it would be seriously against the interests of Ireland, generally, if it should be done away with.

3850. Do you consider that this is a right view of the position of the Museum of Irish Industry: that it is distinct from the Royal Dublin Society, in being a public institution, supported wholly by public funds for the use of the public, and directed by a scientific head responsible to the Government, administered by scientific men selected on the grounds of fitness; do you think that a fair representation of the state of it?—I think it a fair representation of the Museum of Irish Industry as at present established.

3851. And you think it a proper composition for an educational institution?—Yes; but I think it more or less hampered by having the Museum to take charge of.

3852. You would remove the Museum altogether from it?—Yes.

3853. Is this description of the Royal Dublin Society correct, that it is composed of a number of subscribing members, and is consequently a private society, with certain specific privileges, governed by a body varying in its character, and having no scientific head directly responsible to Government; are you of opinion that that is a correct description of the Royal Dublin Society?—I think it is rather a fair description.

3854. If that be a correct description, do you think that is such a body as any industrial functions should be entrusted to?—Certainly not; I am against entrusting any educational functions to the Royal Dublin Society.

3855. Is there anything in the circumstances of Ireland which renders it advisable that the technical and scientific instruction of that country, which

which is paid for by the State, should be entrusted to a body of private gentlemen rather than to a scientific institution, such as we have in England?—No; it is decidedly against the interests of the Irish people.

3856. Under these circumstances, would you recommend that the Royal Dublin Society may be relieved of those educational functions, for the management of which it is not specially adapted?—I would say yes, of "all."

3857. Do you not think that there are some educational functions which might be left to them, such as a veterinary school and a professorship of agricultural chemistry?—My own private opinion is, that I am very much inclined to take away from them every educational office, and to allow the Royal Agricultural Society of Ireland to have the Veterinary School: I would not give it to the Royal Dublin Society, for fear it might become something more by-and-bye; I would take every educational function from them. I do not know how far a professor of comparative physiology in a veterinary college might not become a professor of human physiology. I have attended veterinary colleges in France, and have always found it difficult to draw the line between the teaching of comparative anatomy and human physiology.

3858. Under the head of Zoology?—Under the head of Comparative Anatomy; therefore I do not think the Royal Dublin Society should have any schools whatever.

3859. As the Royal Dublin Society has the Garden, and Museum of Natural History, and a library, would you be disposed to recommend that that part of the institution should be liberally dealt with?—Certainly; but I have given in evidence that I think it desirable to remove the Museum from Stephen's-green, and amalgamate it with the general collection; and then I should like to see the Gardens, the Natural History Museum, and the Library under Government charge, as three great national departments for Ireland; that is to say, that there should be a national institution, consisting of a national library, a national botanical garden, and a national museum, the national library as at the British Museum; the gardens as at Kew, and the museum as at the British Museum. The educational staff at Stephen's-green, being a Government body, could avail themselves of any assistance from the other Government body which would have charge of the museums.

3860. You object to the Royal Dublin Society as being directed by a council whose members are conflicting and have no individual responsibility; has any instance ever come under your notice in which, if there had been individual responsibility, injustice might have been avoided?—I think many cases, from time to time, have occurred, in which, had there been individual responsibility, things would have been done that were not done because of this divided responsibility. As to one particular case, I might say I feel strongly; it is the case of one of the Society's professors, in which I do not think justice was done, but in which it probably would have been done if it had been under Government control, or that of one single individual.

3861. Whose case do you refer to?—Professor Schouler.

3862. State the case to the Committee?—I will state it very briefly. Before the Irish Industrial Museum was established, Professor Schouler was one of the professors of the Royal Dublin Society. Dr. Lyon Playfair, in a letter from the Board of Trade, seemed to be under the impression that Professor Schouler was an old man, and stated that from the very advanced age of Professors Schouler and Davey, and their great scientific attainments, he would recommend that their salaries should be continued, and that they should remain as professors of the society. I think it was in order to give them their salaries, as the Government could not give them a pension. They were to receive the salaries, but no additional duties were put on them. Professor Schouler was only 49, which I do not consider an advanced age. In the course of four years, Professor Schouler, being unable to lecture by reason of ill-health, was excused on a medical certificate from his duties until he was recovered. My impression was that the committee gave him leave of absence until he reported that he was able to carry on his own lectures. Two years afterwards, Professor Schouler was ordered back. He came back, and proved to be physically unable to stand for five minutes, still less to lecture for an hour, and the alternative was given to him of appointing a *locum tenens* or resigning. The appointment of a *locum tenens* he submitted to, but I think he should have appointed him himself, or have given the names of two or three for the council to select from. I think the case of hardship was taking half his salary to pay that *locum tenens*, and, in the next place, appointing a gentleman to lecture whom he did not suggest to the committee; because, had he been allowed to do what other professors do at Oxford, Cambridge, or Dublin, he would not necessarily have been deprived of half his salary. He would have appointed a gentleman who would have acted for him for nothing, as often occurs with other professors.

3863. You do not think, if it had been under a responsible head, who would have been brought to task, that such a case would have happened?—I think not.

3864. You only give that as one illustration?—Only as one; perhaps the worst I could give.

3865. Sir *Edward Grogan.*] You put it forward as your strongest evidence?—Yes.

3866. Have you any other cases which you wish to mention?—There are many cases in which the directors of the museums are tied up in the way of exchanging specimens. Owing to their having a committee whom they must consult, and without whose advice they can do nothing, they have great difficulty in exchanging specimens. That is a difficulty I have experienced.

3867. *Chairman.*] As regards the exchanging of specimens, did you find that the Natural History Committee interfered in any degree with the superintendent having charge of the collections?—Without wishing to pledge the professors of Queen's College to the exact truth of the following statement, I give it as my impression that the whole of the three professors of natural history in the Queen's Colleges and myself find it impossible to carry out exchanges, even when it would be for the good of the Royal Dublin Society to do so, because of the mixed management; that is to say, the director cannot give us his word that the exchange shall be carried out unless he has consulted the committee, who meet once a month, and who might wish to have a report on the matter.

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matter. In one instance I had to wait two months for a specimen, and in the meantime I had to go to Vienna, and all interest in getting it was lost. I carry on exchange with the Queen's Colleges, and if I have specimens in duplicate I give them a choice. I would as soon go to the Royal Dublin Society, on account of my personal friendship for the director, if I had the choice.

3868. I understand the director is hampered by the committee?—Yes.

3869. And that is one of the abstract objections, that superintendents of the different departments are hampered by the actions of fluctuating committees?—Yes. Had it been in the Irish Industrial Museum, I would have had Sir Robert Kane's word, and made the exchange at once.

3870. Is the attendance at the committees irregular?—I think, considering the valuable time of the members, the attendance is very regular. As far as the committees of the library and natural history are concerned, I think that they are very regular.

3871. You are a lecturer under the Committee of Lectures?—I was some years ago, but I am not now.

3872. Are you in the habit of giving lectures?—Yes, in the University.

3873. And you are acquainted with the lecture system pursued under the Committee of Lectures?—I was once on the staff, and delivered a course of lectures.

3874. How long ago?—It was either 1858 or 1859; I think 1859.

3875. Are you in favour of a course of scientific lectures to be entirely free, or accompanied by some small nominal contribution?—Might I ask what you mean by scientific lectures?

3876. I mean a course of scientific lectures intended for the artizan class?—I presume such as are delivered in Jermyn-street. There would be a larger audience if they were free; but I do not think that there is any absolute objection to a very small fee, simply to test the interest taken. I do not think that there is, practically, any objection.

3877. Are you of opinion that a small fee should be imposed for testing the interest taken in the lectures?—Individually, I think some lecturers would rather have a large audience, and in that case it would be better not to have the fee.

3878. What do you mean by a small fee?—It is hard for a University man to say; I am not familiar with the charges at Jermyn-street, or the Museum. I hardly know what would be a small fee or a large fee.

3879. Are you of opinion that all systematic instruction which is followed by examinations and prizes for certificates of competency, should be given under the direction and control of one officer responsible to the Government?—I think so.

3880. With regard to provincial lectures under the Committee of Lectures in Ireland, are you favourably disposed to them?—I think that they are very valuable.

3881. We have lately heard from an intelligent witness, Professor Sullivan, that he attaches importance to these provincial lectures, but objects to the system of examination that accompanies them. Do you agree with him or differ from him there?—Do you mean the system of examination at the close of the lecture, or of the special teaching?

3882. What I may call a tutorial addition to the lecture?—I think that it inflicts some hardship on the lecturer, but I think it does good to the audience, if I may judge from the result of the examination in my own individual case. I had a large class, to whom I had to give an extra hour three days a week, and I must confess that I had to commence with this class at A, B, C. My teaching them could not be compared for a moment with the lectures delivered in the theatre on the lecture nights. It had the same basis, but in detail it was different.

3883. I presume, from your former answer, that you are not in favour of the present complex system under a committee, but you would have these provincial lectures given under one head, responsible to the Government?—Yes; under, I think, the same head that manages the educational staff of the Irish Industrial Museum.

3884. And from your knowledge of Dr. Sydney, the able and efficient Secretary to the Committee of Lectures, you would gladly see him attached to the Institution which would have charge of these lectures?—Yes, if he got an adequate salary.

3885. I understand that you would wish to see the whole of the 500*l.*, part of which has been expended in the salary of the Secretary, expended in increasing the number of provincial lectures throughout Ireland, accompanied by an adequate salary for the Secretary?—I think that the number might be advantageously increased, and I think it better to take the provinces more or less in order. There is at present an uncertainty where the lectures are to be delivered; but that would be a matter of detail for the director, on which it would be better for me not to enter. With reference to the palæontological collection of the Royal Dublin Society, I would like to go more into detail. The palæontological collection is in some instances unique, and of great value, and whilst these portions do not clash with the collection in the Irish Industrial Museum, they would supplement that collection. The collection of Arctic fossils is nowhere else more complete than at the Museum; but I would have it as a supplementary collection in the common National Museum. If we had one Museum, I do not think that there could be any objection on the part of the geological survey. I think if the director of the survey wished to have some specimens of fossils collected by his orders named, all he would have to do would be to send to the National Museum, and then the director would name them, and would have the specimens to distribute either in his own Museum, in any other Government Museum, or to exchange.

3886. Sir *Edward Grogan.*] I understood you, in answer to a question from the Chairman, to say that you thought the collection should be transferred to the National Institution under the control of the Government, but not to the Royal Dublin Society?—The Irish Industrial Museum.

3887. The geological collection at present located in the Museum of Irish Industry, you say, you would recommend being transferred to the National Museum, and not to the Royal Dublin Society?—Certainly.

3888. Do I understand you to say that it ought to be transferred from the Irish Industrial Museum to that projected establishment?—I think so.

3889. Your object is to establish a general museum, of which that collection should form a part?

part?—Of which that collection should form a part, as representing for the greater part Irish geology.

3890. Do you go so far also as to say that the Natural History Collection, at present in the Royal Dublin Society, should be transferred to the National collection?—It should form its nucleus.

3891. It should form part of the intended National collection?—Certainly.

3892. And taken from the Royal Dublin Society?—I was regarding it as even now a National collection as founded by Act of Parliament, and purchased by public money.

3893. You mean to transfer it from the custody and care of those who at present have it, viz., the Royal Dublin Society, and that it should form part of the National collection? — Certainly.

3894. Do you mean also that the collection, at present in the Museum of Irish Industry, should be transferred to the central body? — The economic collection, yes.

3895. Your object is to establish one large National institution, in which all the present collections should be collected in one building?—Yes.

3896. You stated that there were constant additions being made to the collection of the Royal Dublin Society by donations?—By donations.

3897. Are additions made by purchases? — There may be small additions from time to time.

3898. Am I justified in saying "very small" purchases?—As a rule; from time to time somewhat large purchases have been made, but as a rule they have been small.

3899. And the increase of the Museum is entirely owing to donations? — And the purchases.

3900. But the purchases have been limited?—Sometimes they have purchased largely, *i.e.*, according to their means.

3901. Liberally?—I have not been to the Committee when they could do so.

3902. Previous to those large purchases?—I say that they are large according to their means.

3903. What do you mean by that?—I mean that a purchase of 40*l.* would be very large, according to their means, though it would be a bagatelle at the British Museum.

3904. Were the Committee the parties who made the purchases?—Yes.

3905. And must they have had special reasons to induce them to purchase?—They always have.

3906. And they considered it an opportunity of obtaining a valuable acquisition for the society?—Yes, and the objects being a public desiderata.

3907. Did the increase principally arise from donations?—Principally.

3908. I presume the donations made to the society by those who gave them were in consequence of the general popularity and usefulness of the body?—I do not quite agree in that. I think many donations were made by men who used to give them because it was the only public Museum in Ireland. I have been the means of obtaining presentations from my friends, but I do not think the fact of its being the Royal Dublin Society ever entered their minds.

3909. Is there a collection of similar objects in the College?—Yes.

3910. And do you superintend them?—Yes; as professor I have the Museum of Zoology under my superintendence.

3911. Do you get many donations?—Of late years I have not; in the course of past years we have had many, but I have not encouraged them, ours being a small collection, and it being a great trouble to take care of things that are not wanted.

3912. From your knowledge of the Royal Dublin Society and of the members personally, have you any doubt that, as a body, it is popular in the country?—I think the country knows comparatively but little of it; a member may be popular in his own district as a country gentleman.

3913. I ask you whether, as a body, the Royal Dublin Society can be considered popular or unpopular in Ireland?—I could not answer one way or another, although I have had extensive communication with the north of Ireland; I never heard whether it was unpopular or popular there.

3914. Is it a fact that the members of this society come from all parts of Ireland?—I should say so.

3915. And is not their becoming members of the society, in the first place, evidence that they approve of it?—I know that many gentlemen become members of it for philanthropical purposes; for obtaining admissions for their friends to the library, or sending up people from the country towns with orders.

3916. They join for philanthropical purposes, because they consider it a useful body to the country?—Because they could be of a certain amount of use to their friends by joining it.

3917. And from the number of country gentlemen joining it with that view, can you say if it is popular or unpopular?—I do not know. If you were to ask me if the Royal Irish Academy were popular, I should not know.

3918. I ask is the Royal Dublin Society popular or unpopular?—Well, I will say popular, but I really do not know which.

3919. The constitution of the society you are perfectly aware of?—Yes.

3920. Are you aware of the projected constitution?—Yes, as by the new printed charter.

3921. Are you aware of the alterations proposed in the constitution of the society, in consequence of the recent examination of the Treasury Commissioners?—I am.

3922. And are you aware of the nature of the changes?—Yes.

3923. Will the changes modify your opinion that the constitution of the society is attended with possible prejudice to the public?—I am strongly of opinion that it will not tend to improve the society.

3924. Will you explain yourself?—We will presume the case of the council dismissing an officer, and an indignation meeting being held on such a dismissal—I am supposing this to be possible—the very next time that the committee are elected, none are elected on it who will not put back the officer, and I do not think that it would conduce to the harmony of the society to leave so much in the council's power, when the members might act in force, and practically put out the committee at the end of three years and put in a new one.

3925. Would not the possible prejudice to the public which you infer from the existing constitution of the society, be the irresponsibility of the head having the power positively to decide upon any

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any point not to be got rid of?—I do not think I said that the public had any prejudice against them.

3926. You said that there might be a possible prejudice to the public?—I said a possible prejudice against them.

3927. No, a possible prejudice to the use or convenience of the public from the constitution of the society. What do you mean?—If I used the words, I should like to know the context. What I meant by possible prejudice to the public, was possible detriment. For example, if the books were not there when the public went. I use prejudice in the sense of detriment.

3928. You have illustrated your interpretation of the word "prejudice" by the lending of the books?—I give it as a possible detriment; but if I am not right, I would use this word detriment instead of prejudice, unless you use the two words as synonymous.

3929. Is that the only instance in which, in your judgment, a prejudice or detriment to the public would arise from the constitution of the society?—I have named another possible detriment to the public, and that is the more or less hampered condition of the directors of the different departments.

3930. That is your interpretation of prejudice?—That is my interpretation of prejudice.

3931. You have a council like the Royal Dublin Society, under the new constitution, with power to assent to, or dissent from exchange; would that objection be removed?—It depends upon the arrangements, of which I know nothing now. The council might meet once a month, and I see, then, no difference between the committee and the council; I would rather, indeed, have a committee, because a committee is supposed better to understand the matter. I do not quite understand as to what position the directors would hold their offices in reference to the new council.

3932. You object to the books being lent out, because of the prejudice that might arise to the public through a book that some individual wished to consult being lent out?—Yes.

3933. Do you allude to any particular instances within your own knowledge?—Several within my own knowledge. I cannot at this moment give the date of the lending or the volume of the book; but I have gone to get books, in company with a colleague, and have not been able to find the books in the library. My friend was only in Dublin for a day or two, and I consider it was to his detriment not finding the books.

3934. Did you bring it under the notice of the library committee or the council?—I had no reason to do so. The book had only been out a legitimate length of time; but such a thing is liable to arise on every occasion.

3935. I understand that the "grinder" in college took the books for instructing his class; how long were the books out?—The one I took a note of was out about three weeks.

3936. Did you take any step to bring it under the notice of the council or committee?—I had no occasion to do so, as he had a right to keep the books four weeks.

3937. And the period allowed had not expired?—No.

3938. Why was the privilege recalled?—I never said that the privilege was recalled.

3939. But you objected to the use of the privilege in this particular instance?—Because the works were on practical engineering, and were used by him to save buying what I consider his stock-in-trade. I do not think that a public library should have its volumes used as drawing-material say for an engineering class.

3940. Were the volumes injured?—From my knowledge of the position of the gentleman in question, I should say certainly not.

3941. Was it a high class?—A middle class of book.

3942. Were they expensive books?—Not very expensive.

3943. He thought proper to borrow from the society to assist his class; what objection do you see to that?—I hardly think that public money should be spent to assist any member of the public to the detriment of the others.

3944. But what is the detriment?—It was asked for, and the librarian discovered that it was out.

3945. You instanced the case of Mr. Scouer, as a case of injustice, which, in your judgment, arose from the existing constitution of the society, and which, had there been some individual responsibility, would not have occurred?—Possibly would not have occurred.

3946. Do you not think that the new constitution of the society would have altered that case in any shape whatever?—I am afraid not.

3947. Is it within your knowledge, that in the report it was alleged that he could have superannuated, and that he was allowed to retire on a salary, because there were no means of giving him a pension?—That is my impression; Dr. Lyon Playfair's language was, that they were to take the salaries, and perform no increased duties on account of advanced age.

3948. You have given us the age; was there a mistake in Dr. Playfair's statement in that respect?—There was.

3949. Would there be a superannuation in regard to his bodily infirmities?—Both Professors were eminently deserving of it.

3950. But at the time the minute of Dr. Playfair's was written, were they in that state of health that they could, without prejudice to themselves or the public, continue their lectures?—I think one was more or less incapacitated by ill-health, and the other by age, from delivering lectures. That was recognised by the Government. The Government did not wish to transfer them to the new establishments.

3951. I believe that Dr. Scouer retired to Aberdeen?—To Glasgow.

3952. Was he afterwards employed in any scientific pursuits, or public occupations there?—From time to time his health got better, and now and then, at certain times of the year, I understand that he gave short lectures to a small society in Glasgow.

3953. Was he naming a collection there for them?—I do not consider it so; but I could not say positively.

3954. Do you know that the fact that Professor Scouer was sufficiently recovered to undertake the duties, came to the knowledge of the Royal Dublin Society, and that was the reason why they asked him to return, and fulfil his duties?—If the society was informed that he was able to attend, the easiest way would have been to get a medical certificate, which they did in Dublin. He was physically incapable when in Dublin.

3955. I object that when he was called for, he should

should have sent a medical certificate?—I object that they did not find out whether he was sufficiently recovered in Scotland, and so brought him over to his detriment.

3956. Here is a society for improving the condition of the people of Ireland finding an officer, drawing money from them, engaged in public business in Scotland, do you not think they discharged their duty in asking him to return to his local duties?—I think the Government intended no lectures to be delivered by these professors, as they might be antagonistic to those delivered in the Museum of Irish Industry. They did not wish lectures to be delivered in the Dublin Society.

3957. And do you think the society went beyond its province through an over zeal to advance the interests of the public in asking this gentleman to come back?—I do not think so.

3958. Were they right?—I think they were wrong in asking him to come across without first finding out if he were in sufficient good health. I do not think it was so much over zeal.

3959. If they found a professor, drawing his annual salary, able to perform duties in another country, was it natural that they should ask him to come home?—I do not think so if I understood it was given to him in place of superannuation.

3960. Why do you say that?—Because when the Government did not take the professor to the Museum of Irish Industry, and allowed them to stay, it was because they could not superannuate them.

3961. That is the inference you draw?—Yes, and it was certainly the understood inference drawn at the time by my fellow members of the Natural History Committee.

3862. It appears that in this instance the committee or Dublin Society pressed their power of asking the professor further than you think they ought?—Yes. If you will allow me to say it, when they allowed him to go away until his health was restored, I think they should have seen that it was restored before they brought him back.

3963. When Professor Scouer received the summons to come back did he send any certificate of his inability to do so?—I am not aware that he did; such facts are all recorded in the society's books.

3964. Would it not have been more natural for Professor Scouer to have said he was not able to return, or that the work was such as he could not perform without injury to his health, than that the Dublin Society should take steps in the matter?—It is the course I would have adopted myself. I would have stated I was not sufficiently recovered; but at this moment I am not aware of the wording of the letter of Professor Scouer.

3965. Did he write any letter at all?—I do not know.

3966. Have you any reason to think he did?—No. My impression is that he did not.

3967. If he did not write to state his inability, is it not natural that the society should ask him to come, when they found he was doing duty for other societies?—I think so.

3968. If he did not intimate his unfitness to come over and attend to his functions, the fault was with him and not the society?—The fault of going back?

3969. The fault of non-intimation of his inability did not rest with them, but with him?—Certainly.

3970. And consequently, when he was called upon to resume his duties, they were really acting within their province and fulfilling their duty to the public?—Yes, in that sense; but the great case of hardship was the appointing and paying of a *locum tenens* for him.

3971. We will go step by step. You put to us a broad proposition; but we will take it more in detail. You alleged that the great injustice practised by the Dublin Society was the taking one half of his salary and giving it to a deputy to do his duties?—That he was not appointed by him himself.

3972. Are you sure you are correct in that statement, or that you are aware of the facts at all?—I am well aware of the facts, and I think I may state, on Professor Scouer's authority, and that of his friends, that the deputy was not appointed by him.

3973. And the salary?—As to the salary, Professor Scouer gave up half.

3974. Are you clear upon that?—It is my impression; I have not gone into this case with sufficient care to get the exact dates and other particulars; I state merely the general effect according to my impression.

3975. You stated it as a fact?—Not as to dates.

3976. I have not asked you as to any date whatever. You recollect saying that one-half of Professor Scouer's salary was taken away from him and given to the deputy?—My impression is that the salary was 150 *l.*, and that 50 *l.* was taken from him. That is not half.

3977. Fifty pounds was taken from him to give to his substitute?—If I said half, it was an error of mine.

3978. Do you know the amount of salary the Dublin Society paid him; was it 200 *l.* a year?—If you will let me refer, I will tell you; but my present impression is 150 *l.* (*after referring to papers*), 150 *l.*

3979. At all events it was not one-half?—If I said one-half it was a mistake.

3980. You said so half-a-dozen times. Your objection resolves itself into this: that a substitute not appointed by himself was paid out of his salary?—That he was paid out of his salary.

3981. That gentleman got 50 *l.* a year?—Fifty pounds a year.

3982. Did you know him?—Yes, personally.

3983. Is he a competent man in his position?—I think so; but that is a question I need not go into.

3984. Your objection is that he was not nominated by Professor Scouer?—My objection is that Professor Scouer had to give up a certain portion of his income for the payment of a *locum tenens*, and was not allowed to appoint him.

3985. Was it any part of their bargain whatever that he was to appoint his successor or *locum tenens*?—I do not suppose any bargain was made.

3986. I do not ask that; was it any part of the bargain?—I know nothing about any part of the bargain; but simply I consider it wrong that part of his salary should have been given to a *locum tenens* he did not appoint; but I do not wish to answer questions as to any bargain between Professor Scouer and the Royal Dublin Society.

3987. Were the facts that on the proved inability of Professor Scouer the society said, "we must

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must have some person to perform your duties, and you will appropriate 50 *l.* a year to his payment"?—That would be essentially what I have stated, I think.

3988. I ask you only as to the fact, was that not the fact?—I think so.

3989. Then the society selected a gentleman in every respect competent and trustworthy, and you object to that?—I do object to their exercising educational functions which they need not have done, and it was understood that Professor Scouer was to enjoy his 150 *l.*

3990. But they did and do now exercise educational functions?—They do.

3991. Would it be right of them to allow a gentleman to lecture of whose competency they had not any certainty?—When a professor is asked to appoint a *locum tenens* in the University, he does so by handing one or two names to the governing body, and they select the most desirable. I still think that the proper way.

3992. Are you personally acquainted with Professor Scouer?—There is no personal intimacy between us, but I am familiar with his writings.

3993. Have you seen him since this transaction?—Since the arrangement, I have only seen him when he was going away.

3994. Did he then make any complaint of the way in which he had been treated by not being allowed to appoint his *locum tenens*?—He made none to me, because I had no conversation with him; but I am aware that he did make such complaints to his more intimate friends. I only knew him as a man of science.

3995. Did Professor Scouer make any application, or claim, or right to nominate his *locum tenens*?—I cannot answer as to that.

3996. And yet you complain of injustice when you are not aware of the facts?—Because, if I myself, from ill health, cannot deliver my lectures, I never claim the right to appoint a *locum tenens*, but should forward the names and ask which will be agreed to.

3997. Did Professor Scouer take that course?—My impression is that he was not allowed to do so, because when the arrangement was made that he was to give up part of his income, the Society said they would appoint the *locum tenens*.

3998. Did he ever claim the right to appoint his *locum tenens*?—I do not think he did, or that he had the right.

3999. If he never claimed the right he could not be refused it?—Certainly. It may have been taken out of his power to make the claim.

4000. Have you any reason for thinking so?—That is my impression.

4001. State your grounds?—Professor Scouer knew there was an advertisement put in the Dublin papers that there would be an election for a *locum tenens*, and he thought it better not to protest against it.

4002. As far as your knowledge goes he never made the application?—I do not think he made an application.

4003. Did he ever claim the right of nominating his *locum tenens*?—No, nor would I. I would send the names in if I was asked to do so.

4004. With regard to the exchange of specimens, you think the complicated arrangements of the Royal Dublin Society are prejudicial to the public interests?—Yes.

4005. Would you give to professors of the Royal Dublin Society, or of any other society, power to exchange without reference to the Committee or those connected with the disposing of the property of the society, or the directors of the department?—I would give the director of a department discretionary power to exchange for the benefit of the department.

4006. And who is to judge of the benefit?—If you have no confidence in the director there is no one else you could have confidence in.

4007. Are you alluding to any particular instance of this complicity of exchange?—Yes, I have found it my own experience, and also with the museums of the Queen's Colleges. The complication is so great that they will not take the trouble to overcome it, and therefore the Dublin Society are the losers.

4008. Therefore, because the directors have not the power of exchanging without consulting any member of the society, either the committee, or the council, you think that rule wrong?—The council give the director a certain amount of responsibility. I would give him a certain further amount, and would say, "if you have a large number of specimens of no use to you, and you have the power of exchanging them for what are of use, do so." I can see no difference between that and a power to purchase specimens.

4009. Does he invest the money without the previous knowledge and concurrence of the committee?—To a certain extent. He is allowed what is called "petty cash" for the purchase of certain specimens.

4010. But there is nothing of serious amount?—Judging in my own situation, I consider that I could by exchanging small specimens do much more than if I had to consult the committee every month. I do not think we should give the director all the control, but some discretion in small things. I presume in difficult cases he would await ultimate orders.

4011. As to absolute delivery of specimens exchanged?—In the case I referred to, it was absolute exchange. He had more of the specimens than he could use, and I asked him for some for which I was to give him certain others of which I had several.

4012. You wished the specimens to complete your own collection?—Yes, and to give him something to complete his.

4013. And it was an advantage more or less to you to get it?—Certainly.

4014. And in consequence of the delay arising from the necessary reference to the committee you lost it?—If you ask for my own motive, I would not go before the committee to ask whether what I gave was worth 5 *s.* 7 *d.*, and what I got was only worth 5 *s.* 6½ *d.*

4015. That was your motive?—I did not consider that the committee could judge.

4016. How is there to be any check if the director is to be allowed, without consulting any one, to dispose of the property entrusted to him?—Because he has to use his own discretion.

4017. That is not the question: how is there to be any check, if the director is to be allowed, without consulting any one, to dispose of the property entrusted to him?—In the first place, he is bound to give a return of every thing that comes into his possession, and, therefore, there is a check upon every thing that goes out of his possession.

4018. Are any of the committees ever summoned for particular purposes?—The committee I am on meets twice a month; the natural history committee meets once a month.

4019. And

4019. And you thought there was so much inconvenience from meeting once a month that you did not proceed with the exchange?—In this case I did not, as I had to be in Vienna in a fortnight, and could not wait for the second meeting.

4020. Could the director have summoned a special meeting, if necessary?—If I had asked him as a personal favour he would; but I question whether I would ask him to summon a committee for what, I think, he ought to have been able to do himself. I object to more interference than I have; if the specimens I had were of great importance, I should not make the exchange without authority. If there could be no question about it, I would do it on my own responsibility. If it was a question of exchanging one recent half-penny for another half-penny in the British Museum, for instance, I would do it, but if it was a matter of two gold coins I would wait.

4021. The director, if he thought fit, might have summoned a meeting of the committee, and did not?—He might; but I do not know the number of days.

4022. You have been on the committee, have you not?—Yes, but I do not recollect the number of days.

4023. If he might have summoned the committee in three days, and did not do so, is it not an inference that he did not think the exchange desirable?—I should be sorry to draw the inference.

4024. What inference do you draw?—There might be a dozen inferences; but the only inference I draw is that he did not summon the committee, because it was during the summer, and members might be out of town, but a dozen other things might strike him, or it might not have been of sufficient importance.

4025. You did not ask him to summon the committee?—No.

4026. And you did not consider it of sufficient importance?—I said to him, "Will you give me so and so for so and so." He said, "I would willingly do so if I could, but I do not know if I dare do it until I summon the committee." My answer was, "If you wait to summon the committee I will not trouble you." I exchanged the specimens with Queen's College Museum, Belfast.

4027. After this communication and admission that the specimen was valuable, he did not take the step of summoning the committee?—He did not, and he may have considered what I have stated to you was sufficient to induce him not to summon the committee. I did not wish him to summon a committee to consider a question of a bird.

4028. You stated that you thought the payment of a small fee to the lectures would be desirable; do you consider 3*s.* or 4*s.* a small fee to be payable by students in the systematic class?—I do; but the difficulty I had was, what people should pay, of whom I knew nothing. A small fee in the University is one thing, but it might be large for other classes, of which I have no experience.

4029. I understand that between 3*s.* and 4*s.* is the amount paid by the students to be admitted into the classes of systematic instruction?—I consider it a small fee.

4030. Is not that the practice at this moment?—I believe the fees are large in the practical classes.

4031. Classes for special instruction subsequently?—In the chemical classes, I believe, they are larger.

4032. Do you know anything about the fees at Jermyn-street?—Not of my personal knowledge.

4033. Do you, I ask?—My memory does not enable me to go into detail. I have asked from motives of curiosity, but do not recollect sufficiently to answer your question.

4034. Do you know if they are more or less than the fees payable in Ireland?—I have no reason for knowing, except that the audiences are of a rather higher class than in Ireland.

4035. Do you know that in Dublin there was a small fee of 6*d.* recommended?—I am aware of that fact.

4036. Does the small fee you have alluded to mean the 6*d.*, or the 3*s.* or 4*s.*?—Three shillings or 4*s.* for the course, I think; it was a kind of entrance fee; I consider 3*s.* or 4*s.* not too much for a course of scientific lectures.

4037. Would you let any attend who did not pay the fee?—I would not let them attend strictly scientific lectures.

4038. Would you confine the provincial lectures to scientific, or general popular lectures?—To popular lectures, I think, without fee.

4039. Provincial lectures in the country?—The rule, I believe, is to charge a small fee on admittance, and have different classes.

4040. Who received the fee?—My impression is that it is the secretary of the institute that receives the fees, but where it goes to I do not know.

4041. Does not part of it go to the lecturer?—The lecturer gets a certain sum for his lectures, but whether this goes to him or not I do not know.

4042. Whether the local body who get the lecturer charge any fee or not, the lecturer gets no part of it, as far as your knowledge goes?—I recollect that the lecturer gets a certain sum of money from the committee of lectures; and I believe they give it plus a certain sum obtained from the Local Institute to the lecturer, but this point I imagine can be easily determined elsewhere.

4043. And you are of opinion that the personal attendance and teaching of the lecturer to the pupils who attend are highly desirable and useful?—I think it a doubtful matter; we do, no doubt, impart a certain amount of instruction, but you actually cause the professor to undertake the two duties of delivering a course of lectures to adults and to juniors; and to discharge the duties correctly he must teach them differently.

4044. He gives a popular lecture to those who chose to attend it?—On the evenings I lectured popularly, I found that having free lectures for classes wishing to learn things, I should teach them some facts, but should not make them too scientific.

4045. During the time these popular lectures were not going on, you were giving special instruction to people who wanted their difficulties solved?—Who wanted to go in for prizes.

4046. And they required the assistance of the professor on points of difficulty?—I was instructed to do so by the committee, and I did so.

4047. Was such a system found to work well or ill?—In my individual case it worked well.

 4048. It

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4048. It entailed labour, and perhaps inconvenience to the professor, but it was beneficial to the students?—I think so. The gentleman who examined them (a professor from Dublin) thought that this was an important part of the lecture system, and I acquiesce in that.

4049. Did you apply for the appointment of provincial lecturer, or was it given to you?—It was given to me.

4050. After you accepted it, was it understood that this was to be part of the duty of the lecturer?—When I was told that I was appointed, I asked what were the duties, and I discharged them.

4051. Though they were a little burdensome, you, individually, made no objection?—No.

4052. Nor could any objection be raised by a professor to anything so reasonable?—No; I think the amount of good they would do ought to prevent their making any objection to the tediousness of it.

4053. You have a strong feeling against lending books from the library, and you have stated instances in which disappointment has been caused to gentlemen by not obtaining the books. That is, I believe, one of the principal, if not the only remaining privilege belonging to members of the society?—They have certain other privileges, such as a right of admission to any shows; but I myself consider that is the most essential privilege they have. Others might consider the right to go to exhibitions and the shows.

4054. Is there any admission of the public to the shows?—I believe always, on payment of certain sums.

4055. What sums?—They vary, I believe, according to the show. If there is an exhibition in Dublin all members are free.

4056. What do the public pay?—My impression is that it is a guinea for the season, but I have not been there myself.

4057. Do you conceive that the advantages of membership, in your own case, of being admitted to the show would in any way determine your becoming a member?—Not in my own case, because I do not go.

4058. As far as other members are concerned, do you think it influences them in becoming or not becoming members?—Taking large numbers of the Royal Dublin Society, I think my answer is, that they, almost universally, join it simply for philanthropical purposes, as the only society in Ireland for doing certain things.

4059. The society is very useful, and that is the motive for joining it?—It is a society for doing certain good to Ireland, and, therefore, they join it.

4060. But the mere object of getting into the show gratuitously would not be sufficient inducement to them to join?—In my own case it would not; and of others I could name, it would not.

4061. Is not the lending of books the only privilege attended with advantage to the members and their families, particularly if they are of a literary character?—Yes; and I can adduce the case of my getting books from the Berlin Royal Library as a great advantage.

4062. When you were at Berlin, you did not entertain the same objections to lending books that you do now?—I object in this case, because though it is an advantage to members and their families, that does not compensate for the loss it is to Ireland generally; and, as a member, I do not think of myself, but of the great good to be conferred on the people of Ireland.

4063. When books are lent in Berlin from the library, is that a great advantage to you?—Yes; but it was a case where there was no corresponding detriment, because all the provincial towns in Prussia have the same works. I mean, for instance, that in a town in Prussia corresponding to Belfast, you would have the same book that you would in Berlin.

4064. Do you know anything of the system of lending books in England?—There are large institutions, like the British Institution, which lend books, but I am not aware of any library subsidised by the Government.

4065. I did not say subsidised by the Government. Are you aware of the principle in this country of lending books from large libraries. Did you ever hear of their being lent at Oxford and Cambridge?—Yes.

4066. Are you aware that it is highly valued?—Yes.

4067. And that they lend many books at a time?—Yes, a boxful, any distance, and, practically, for any time.

4068. And would not any inconvenience that you suppose arises from the Dublin Society lending books arise from that?—It does not exist merely because the Oxford and British Museum libraries are so nearly alike, that one may be consulted if the book is not in the other. Therefore, there is no direct detriment. The Cambridge library is only on a gigantic scale what the University of Dublin lending library is on a small scale; in addition to the large library they have a small lending library.

4069. And they have adopted it because it was of the greatest advantage in making books known?—That is in Dublin.

4070. I am speaking of Cambridge?—I believe it is kept up simply because it was one of the privileges of the University.

4071. Is it highly prized?—It is highly prized by some, but by others it is not.

4072. Have you any doubt that it is most useful to the members?—No doubt; and it saves the expense of keeping a library.

4073. Would not any inconvenience that might result from the absence of books be found in both cases alike?—I have tried to make a statement that in Dublin it is a fault, because that is the only public library in Ireland. In Cambridge it is not, because there are other public libraries in England. The one is a public and the other is a private library.

4074. Is it a public library in the same sense as the British Museum?—I say it ought to be as that.

4075. But is it?—Not at this moment, in the fact that the books can be lent out.

4076. Is it like it in all other respects?—In some respects it is, but in others it is not. It is, however, comparing a small thing with a very large one.

4077. But you are making the comparison yourself?—I would have it public and on the same basis, but I do not compare them.

4078. Are the class of books alike?—I do not think they are, because in the one you can hardly miss a book that you want, and the other has but a certain set of books.

4079. You mean scientific books?—Yes.

4080. Books on scientific subjects?—And first-class works of reference.

4081. And

4081. And, therefore, the number of gentlemen who might apply for the use of the books and find them absent would be proportionately limited?—Proportionately larger, I say, if they were not lent out. Gentlemen will not come to run the risk of a book not being there.

4082. The risk of inconvenience to the public of books being lent out would be less at Dublin, owing to the quality of the literature?—All things being proportionately less, it would.

4083. The number of students of highly scientific works would be smaller than the general public?—Of course.

4084. Mr. *O'Reilly.*] Do you find that the country members of the Royal Dublin Society are as anxious to keep up the exclusive privileges as the town members?—In my knowledge, certainly not. I never talked to a country member who did not say he would willingly give up all his privileges for the sake of the public.

4085. From your practical knowledge of the exercise of the power of taking books out of the library, who do you think profit by it most; the town or the country members?—The town members, I should say, altogether, the majority is so great. I mean people who live in or about the city of Dublin.

4086. Sir *Edward Grogan.*] You do not mean exclusively the town members?—No.

4087. You stated that you objected to the establishment of a veterinary school in connection with the agricultural school of the Royal Society of Dublin, and the Irish Industrial Museum?—I said that it would be better for the Royal Agricultural Society of Ireland to have it.

4088. Have they ever attempted to establish one?—I believe that they have, but I cannot speak from any amount of personal knowledge.

4089. Have they any place where such a school could be established, or funds for the purpose?—I believe not.

4090. How could a veterinary school be satisfactorily established under their guidance when they have no locality on which it could be placed?—I should say equally well with another society just in the same predicament.

4091. The Royal Dublin Society has "A local habitation and a name?"—The "local habitation" is fully occupied, and the Royal Agricultural Society has a "name" equally with the Royal Dublin Society.

4092. Would you place the school in the Metropolis, or in a provincial town?—In the Metropolis.

4093. Do you know the premises of the Agricultural Society in Dublin; where could they place a school under their control?—I imagine that Dublin is large enough for them to get a place. Of course they would not have it in Sackville-street or Westmoreland-street.

4094. Does the Agricultural Society, to your knowledge, interfere with the Dublin shows in any way?—From my own general knowledge, I should say that they did not interfere; they have their own horse show in Dublin, I mean the one which has recently taken place.

4095. Did they hold the show on their own premises?—No, I think that they have none.

4096. Did they apply to the Dublin Society for permission to hold it on their premises?—I believe so.

4097. Then, is not that an evidence that so far as the horse show is concerned, the Dublin Society has a place for a veterinary school to be established?—I cannot see the inference.

4098. But you know that the gentlemen of the Agricultural Society thought it desirable to hold the horse show there?—They held it there as being convenient.

4099. And holding it on the premises of the Dublin Society, by its permission, is it not evidence that in their opinion they thought the Dublin Society's premises the best place for the show?—Certainly, and probably it was the only place in which they could hold it at that moment.

4100. Is it not a necessary consequence, that if a veterinary school is to be established in Dublin, that locality is the place for such an establishment?—Judging from all the veterinary schools that I have seen abroad, it never could be the place. I have never seen a veterinary college or school so much in the middle of a city. I am not a veterinary professor, and only judge by seeing these schools abroad; and these have always fields for exercising sick animals, if required.

4101. Mr. *Lefroy.*] If the Dublin Society affords better accommodation, do you object to it?—I do not consider that it has any accommodation.

4102. *Chairman.*] Have you ever given the subject of veterinary inspection much attention?—I have considered it in this way: that it is one of the things most badly wanted in Ireland. It would be the greatest boon to have it in Ireland. I have examined the veterinary schools in Prussia and France, but only as an amateur.

4103. Mr. *Lefroy.*] Is your objection to a veterinary school in the premises of the Royal Dublin Society, that it has not within its walls suitable accommodation?—Not so much that as that it would give it educational functions. I see no difference between teaching chemistry to people and teaching them the anatomy of a cow or a horse.

4104. Were veterinary schools formerly attached to the Royal Dublin Society?—Yes.

4105. Do you wish to abolish the present system, so far as the Dublin Society and Museum of Irish Industry are concerned, and establish one central establishment under the direction, control, and management of Government, in place of both?—I am of opinion that it would be advisable to have one great central establishment which should have charge of the Natural History Museum and Library. I apprehend that the botanical gardens would belong to this establishment.

4106. What remains to the society?—As a society, it would have almost the same privileges that the members have at present.

4107. What privileges are there when you have taken away the botanical gardens, the library, and the lecture system?—They would have the same privilege that any other scientific society has.

4108. Define it a little more accurately: you propose to break up the present system, and to remove from the superintendence of or connection with the Dublin Society, the whole of the lecture system, the library, and the museum; what do you mean to say would be the privileges that would remain?—They would have a certain amount of privileges, but it would require some consideration to say what they were. They would have the right of holding agricultural

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shows, the right of admission to the exhibitions, and the right, as every other person in Ireland would have, of going to the library, the museum, and gardens; and of having scientific meetings.

4109. Do you know the number of life members of the society?—I do not know.

4110. Are there 800 life members?—I do not know.

4111. There are a considerable number?—A considerable number.

4112. These gentlemen pay twenty guineas life composition?—Yes.

4113. Do you not think that the wholesale sweeping away of these privileges would be a hardship to them?—I apprehend they are almost all swept away except as to the borrowing of books.

4114. You propose to sweep away the only remaining one?—I do, and I do not think the great majority of the members of the Royal Dublin Society would object. It is more or less audacious of me to say so when I have not asked them, but I do not think that they would object to give it up for the good of Ireland, and considering the great amount of the Government grant, and the small private income.

4115. Do you think the members whose privileges have been swept away should be entitled to compensation for the loss of the privileges they have hitherto enjoyed?—My own individual feeling would be that I would not accept any compensation; and I have asked seven or eight members, and they have all answered that they would not.

4116. Should the privilege be swept away, without an equivalent?—It has been done before.

4117. Should these privileges be swept away, without any equivalent?—In my own case I would not care about it, but I cannot say anything further.

4118. Mr. *Dillwyn.*] You stated that you thought a great number of members had joined the Royal Dublin Society rather for the sake of the benefit the society would produce than for the privileges of membership?—A large number have told me so, and a proof of it is in the fact that they have not availed themselves of all the privileges, and, indeed, many have never been inside the building.

4119. Mr. *Waldron.*] What do you consider a large number in that case?—A great number have joined the society without taking any practical benefits from it. I should consider in my own experience that if I had spoken to 13 or 14 men of standing in Ireland, and they had told me they had spoken to their friends, and they had agreed with them, I should be justified in speaking of it as the opinion of a great number.

4120. You think 13 or 14 a large number out of 1,200?—Out of my own experience.

4121. Did you say the gentlemen volunteered the declaration?—On the contrary, I asked them. Especially wishing to know, I asked such people as sheriffs of counties, who, though living in their counties, were still members.

4122. Were they all sheriffs of counties and gentlemen of that class?—I only said "such men as sheriffs of counties."

4123. Can you name these gentlemen?—I have not got their leave to do so. Some have told me they had no objection to my using their names.

4124. You have said, and I think you laid great stress on the fact, that persons coming to Dublin to consult books could not see them when they were lent out?—That is so.

4125. Have you known any instances of inconvenience to parties coming up to see works of a particular character?—It is not easy to recollect individual instances. I cannot recollect all the instances that have occurred within 12 or 13 years.

4126. Were they friends of yours, or did you come to know of them as a member of the library committee?—Many of them were Dublin University men or friends, professors in the Queen's Colleges, and they would ask me to take them to the library, they not being members, to consult books on some subject they had been working at, and they being caused inconvenience by finding that the books they wanted had been borrowed out.

4127. Had they written to the librarian beforehand to say they were coming to town and would like to see these works?—My present impression is, certainly not.

4128. Do you not think it would be a prudent thing to do so if a person were anxious to see a work?—It would not strike me to do so, if I was going to London to see the British Museum; the impression they were under was that if the books were in the catalogue they would be in the library.

4129. They did not know it was a lending library?—They did not know it was a lending library; there is no mention about it in the printed catalogue, and many of them are distributed about. If they found a work in the catalogue they would take for granted that it was in the library.

4130. They did not come to town specially; but being in town for other purposes they called to see the works?—They called to see them, and had the catalogue, and wished to avail themselves of the books they saw there.

4131. Mr. *O'Reilly.*] If they had written to the librarian to say they wished particularly to see the works, would not the librarian have the power of calling them in to enable them to see them?—If the books had not been out the proper time, he would have no power to call them in.

4132. Mr. *Waldron.*] If they had communicated with him, would he not have asked the parties to bring in the books for the special purpose?—I am sure he would have done everything in his power, but then this case would not have suggested itself to these gentlemen.

4133. You spoke of yourself and another gentleman not being able on one occasion to get a book, and you suffered a great deal of inconvenience by it, you said?—I do not wish to lay much stress on the inconvenience. I could not complete my paper, but I do not wish to exaggerate the inconvenience.

4134. Did you find out what class of persons had the book?—In this particular case, I could not get the slips. The librarian was not present, or the chances are I would have known the person who had the book.

4135. The probability is they were usefully employed?—Very usefully, if you will.

4136. Sir *Edward Grogan.*] The book was not in the University library?—No, it was not; it was a foreign periodical.

4137. Mr.

4137. Mr. *Waldron.*] Have you ever seen the Report of the Committee on Public Libraries?—Not lately. I saw it some time ago.

4138. You are aware, perhaps, that it strongly recommended that all libraries should be lending libraries; you dissent, I think, from that view?—Under the condition that there is only one library in Ireland. In Germany parties are equally sure of getting a book in every town, but a man in Belfast, for instance, cannot get a book there, but must come to Dublin.

4139. Sir *Edward Grogan.*] Are you aware that the allocation of the Government Grant is fixed by the Treasury?—Yes.

4140. And they have no power to go outside it?—And, therefore, I think a different allocation might be advantageously employed.

4141. The money not being so usefully employed as you think it might be?—I did not quite intend to convey that, but that there might be improvement.

4142. Is it your opinion that the funds furnished to the Royal Dublin Society are inadequate for their purposes?—Take the museum, for instance, we have it literally managed by a gentleman and one boy. All these things are notoriously inadequate.

4143. *Chairman.*] Do you think that by a different allocation of the funds of the Royal Dublin Society they might be made adequate?—Very nearly. If the money were strictly given to the public library, the public museum, and the gardens; and if all such matters as the shows, exhibitions, and all other committees should rely on private funds, the money would do all that is wanted.

4144. That would require more private subscriptions?—They would in that case not have so much to do in the other committees. The library, gardens, and museum are the only three departments that I think should have the public money; and for them the grant would be enough.

4145. Then, you would, to a certain extent, circumscribe the functions of the society?—To a certain extent and still keep the same grant of 5,000 *l.* to the Dublin Society, and about 4,000 *l.* to the Museum of Irish Industry, which, if properly spent, would not only keep up a small educational staff in Ireland, but also the botanical museum and public gardens, the library and national history museum.

4146. Mr. *Lefroy.*] You would confine the grant to these three objects, the gardens, library, and museum?—Yes; and I would put them under the hands of Government, and make them public, and the money would be sufficient.

4147. *Chairman.*] Then, out of the Parliamentrary Grant you propose to spend as little as possible upon cattle shows and exhibitions?—It is the society's own moneys which should go to these things, because they are chiefly self-supporting.

4148. If you take from the society its functions, what would the money be expended on?—On these three departments.

4149. Under a different management?—Yes; but no more money need be voted to scientific institutions than is voted now.

4150. Mr. *Waldron.*] Have you ever submitted these views to the Government?—No.

4151. Not in any form?—No.

4152. *Chairman.*] Have you drawn out any plan of this?—A plan of the money that would be really required to keep the departments in working order; and the same does not come to more than the preseut Parliamentary Grant.

4153. How do you arrange it?—So much for the museum; so much for the public library; so much for the garden; and then I give so much for the educational staff.

4154. Is that the paper which you hold in your hand?—The paper I hold in my hand is a detailed explanation of that.

4155. As you would re-arrange it?—Yes.

(*The Witness read, and handed in to the Committee the following Paper*):

MUSEUM.

	£.
Director's salary	400
Zoological assistant	250
Technological assistant	250
Palæontological assistant	250
Specimens	400
Carriage and incidentals	200
Rent, portion of	100
Taxes, light, fire, portion of	200
Servants' wages	250
£.	2,300

Allocated to the Museum of the Royal Dublin Society in 1862 - £. 687. 12. 8.

LIBRARY.

	£.
Librarian's salary	300
Assistant librarian	150
Attendants	200
Servants	150
Purchase of works	400
Bookbinding and contingencies	250
Rent, proportion of	100
Taxes, fuel and light	200
£.	1,750

Allocated to the Library of the Royal Dublin Society in 1862 - £. 1,076. 15. 11.

BOTANICAL GARDENS.

	£.
Director's salary	300
Assistant	150
Foremen and workmen	800
Fuel	200
Plants	200
Carriage and contingencies	200
Rent	100
Economic Museum	100
£.	2,050

Allocated to the Gardens of the Royal Dublin Society in 1862 - £. 1,326. 14. 10.

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ESTABLISHMENT.

	£.
Superintendent's salary - - -	600
Registrar - - - - - -	250
Clerk - - - - - - -	150
Servants - - - - - -	100
Fuel and light - - - - -	100
Rent and taxes - - - - -	100
Contingencies - - - - -	50
£.	1,300
Museum - - - - - -	2,300
Library - - - - - -	1,750
Gardens - - - - - -	2,050
Establishment - - - - -	1,300
£.	7,400
Present Grant to the Royal Dublin Society, minus 500 *l.* to Royal Zoological Society - - - - -	5,650
From Grant to the Museum of Irish Industry - - - - - -	1,750
£.	7,400

EDUCATIONAL STAFF OF STEPHEN'S GREEN.

	£.
The Director and Professor - - -	500
The other Professors - - - -	600
The Chemist - - - - -	200
The Secretary - - - - -	250
Printing and incidentals - - -	200
Country Lectures - - - -	500
£.	2,250
For Museums and Library - - -	7,400
For Educational Staff - - - -	2,250
£.	9,650
Present Grant to Royal Dublin Society	5,650
Present Grant to Museum of Irish Industry about - - - - -	4,000
£.	9,650

N. B.—All increase of grant to go towards increasing the educational establishment at Stephen's-green.

Mr. WILLIAM ANDREWS, called in; and Examined.

Mr. *W. Andrews.*

4156. *Chairman.*] WHAT is your position with regard to the Scientific Institutions of Dublin?—I am connected with nearly all. I have been for many years member of the Royal Irish Academy, and of various scientific societies, and president of the Natural History Society.

4157. Are you a member of the Council of the Royal Dublin Society?—I am an *ex-officio* member, being chairman of the Natural History section of the Royal Dublin Society.

4158. I think you gave some evidence before the Commissioners in October 1862?—Yes.

4159. And, I think, you stated you thought it desirable to concentrate in one spot the collections of natural history, geology, and mineralogy that exist in the Museum of Irish Industry, and in that of the Royal Dublin Society; did you intend it as a positive recommendation that the two collections should be amalgamated, or did you make the suggestion under the impression that it was decided that they should be amalgamated?—I was led by the Commissioners' examination to understand that the Government only intended to provide funds for one institution of the kind in Dublin; and the Natural History Museum being so extensive in the Royal Dublin Society, I thought it was desirable, if any amalgamation took place, the Royal Dublin Society, as the original society, and one that had been long working, and that had within it the elements to carry out fully any objects with regard to museums, or natural history, or zoology should be made the national institution. The amalgamation was not decided upon; and I gave that opinion only, supposing that the Government intended to provide funds for one institution only.

4160. Your impression was that it was decided that one institution should be suppressed; and you thought, on the whole, that the Royal Dublin Society should be maintained?—Yes.

4161. But your opinion was not to the effect that the Museum of Irish Industry should be suppressed?—No.

4162. I gather from what you now state that you are not in favour of the amalgamation of the two institutions?—Not in that way; to a certain extent separations should exist between them; the Museum of Irish Industry was established for certain purposes, and the Royal Dublin Society for others.

4163. You have given considerable attention to the Royal Dublin Society; have you any suggestions to make with regard to the manner in which the collections in the museums should be arranged so as to be most available for popular instruction?—With regard to the Museum of Natural History in the Royal Dublin Society, I think it should be systematically arranged, not merely for popular instruction, but for carrying out science generally in the country. I think that professors should give scientific lectures, and not confine them to popular lectures, because giving popular lectures in one place and scientific lectures in another never lead to utility. The professors necessary for the Royal Society of Dublin to carry out its objects would be a professor of zoology, a professor of botany, professors of mineralogy and of agricultural chemistry, and a scientific professor of veterinary surgery. I think those are the professors necessary to carry out the objects of the Royal Dublin Society; practical husbandry, the development of the resources of the country, and arts and manufactures.

4164. That is the line between the functions of

of the Museum of Irish Industry and the Royal Dublin Society?—Yes.

4165. You would confine the Royal Dublin Society to all matters connected with agriculture, and would encourage them to give instructions in all branches of that department?—No, the objects to be carried out are those that I have stated.

4166. Sir *Edward Grogan.*] You stated that you thought the collections of the Royal Dublin Society should be arranged in the most beneficial manner for general instruction?—They should be arranged in classes scientifically: for instance, the professor of mineralogy should have a geological collection for reference, arranged as to zoological affinities and strategraphically.

4167. How is the fossil collection arranged?—It is not at present arranged. We have a fine collection of carboniferous fossils, and specimens of the Silurian system. We have some unique specimens of fossils, but they have not been at present properly arranged.

4168. Do you mean that there are not facilities for arranging them?—Yes; but not the funds; that is the chief obstacle.

4169. State to the Committee what part has been arranged?—Part of the minerals have been arranged, but not the fossils.

4170. Are the minerals, as far as the arrangement has gone, been arranged in the manner you think most beneficial?—Yes; they are very systematically and properly arranged.

4171. Have they been arranged by Professor Haughton?—Yes.

4172. And his services in that matter have been considerable, valuable, and gratuitous?—Very extensively so.

4173. The fossil arrangements have not yet been carried out?—For want of cases.

4174. I presume you are aware of the nature of the collections?—Yes.

4175. They are rich?—Yes.

4176. Very extensive?—The geological collection is limited, except the carboniferous fossils and the specimens of the Silurian system, but the mineral collection is extensive and valuable.

4177. In recommending a particular arrangement of rocks and fossils, do you believe that arrangement is carried out in the Irish Industrial Museum?—I do not think the same system is carried out there. I think the arrangement is stratigraphical, and not with regard to zoological affinities.

4178. It is the latter mode which has been attempted, as far as it has gone, in the Royal Dublin Society, and you think it the preferable mode?—It is most useful for reference; the other is most useful for teaching in a geological point of view.

Jovis, 16° *die Junii*, 1864.

MEMBERS PRESENT:

The O'Conor Don.	Sir Colman O'Loghlen.
Mr. W. H. Gregory.	Sir Robert Peel.
Sir E. Grogan.	Mr. Waldron.
Mr. Lefroy.	

W. H. GREGORY, Esq., IN THE CHAIR.

Sir RODERICK IMPEY MURCHISON, called in; and Examined.

Sir *R. I. Murchison.* 16 June 1864.

4179. Sir *E. Grogan.*] I BELIEVE you are the head of the Geological Department of the three kingdoms?—Yes, of the United Kingdom.

4180. Of course you know the whole of the arrangement at the institution in Jermyn-street?—I hope so.

4181. That establishment was erected, I believe, principally with a view to what I may call a school of mines?—No.

4182. But was it not principally established with that view?—It was established, in the first instance, to illustrate the geological survey of Great Britain. The minerals and fossils were deposited in Craig's-court, and the collection had gone on for some years before the institution in Jermyn-street was established. Sir Henry de la Beche commenced the collection in 1835, and it was not till 1851 that the institution in Jermyn-street was opened. The opening was attended by the Prince Consort, then Prince Albert.

4183. The original institution, then, was for the safe custody of the geological collection, which was subsequently transferred to Jermyn-street, and the school of mines was grafted on it?—Just so.

4184. Are the different branches of science connected with mining industry taught by professors in that establishment?—Yes.

4185. I understand that you have two classes of pupils there, the matriculated and the non-matriculated, and that the payments for the two classes are different; it is 30 *l.* in one instance?—Yes, for associate students.

4186. And there is a much smaller sum for what are called occasional pupils?—Yes.

4187. Of course, in the establishment of that institution, with a view of instructing our young men in special science connected with mining industry, it was carefully considered that that species of instruction was required, and most useful to the people of the country?—Certainly.

4188. Has there been any minute, or recommendation, or inquiry into the establishment lately?—Not recently, that I am aware of; not any particular inquiries.

4189. But was there not an inquiry by Lord Granville, Sir Charles Trevelyan, and Mr. Robert Lowe, in 1862?—Yes, and there was an inquiry then.

4190. I will read one passage: "The professors agree that in view of the practical necessities of the existing classes of mining students, the instruction at present embraces too wide a range of study in certain directions, and might, with advantage, be more closely confined to those sciences which directly bear upon mining"; is it in contemplation, in fact, to limit the education given in that institution at present in the sense of that passage?—They have made no radical change. That inquiry was in 1862. We have not abridged the number of professors or substantially altered our course of instruction.

4191. As yet?—We have already made all the subordinate modifications indicated in the passage you have read.

4192. I will now call your attention to this: "But it is stated that the young men, who enter into the institution for instruction, in the first instance are badly qualified to commence the study, and it is necessary to commence a primary course of instruction in those subjects until they are fitted for more systematic instruction"; and it goes on, "They also observe the instruction begins at an elementary point, because the students do not come sufficiently prepared on certain essential branches of mining education, are not represented in the school. Some of the professors, therefore, suggest that it would be desirable to add mining, surveying, and the construction of mining and metallurgical machines to the courses of instruction, and to exclude some subjects at present taught from the mining curriculum"; do I understand your answer to be that for the present, and while the students are not advanced sufficiently in scientific knowledge, through the schools of the Science and Art Department, it is proposed to continue the full strength of the institution?—We understand that all the young men coming to us should be already well qualified in the elements of mathematics and other elementary branches of knowledge which we do not teach. The subjects that we do teach, and are illustrated, are mining, mineralogy, metallurgy, geology properly so called, chemistry as a basis, physics, mechanics, and natural history; all these branches of knowledge are taught respectively. We have modified, to a certain extent, the old regulation, *i. e.*, occasional students have now a greater liberty of action, and may attend classes as they please, and may take honours, or get certificates when a sufficient number of marks entitle them to distinction.

4193. When the future pupils, I may say, of this establishment shall have acquired this primary, or elementary education, in the schools specially under the Science and Art Department, do you consider that it will be necessary to

to keep up as strong a staff in the institution as at present?—I conceive that our instruction, relating to every branch of science connected with geology is very effective. I know of no preparatory school which will render it desirable to reduce or alter our establishment. I know of no other establishment that teaches effectually all those branches of knowledge which we profess to teach.

4194–5. There is a further passage: "We now turn to general scientific instruction, as distinguished from the special object of the proposed school mines. It may be considered under two heads: 1st. The preliminary elementary instruction (in those sciences which bear on mining) which is rendered necessary by the students not being sufficiently prepared on entering; 2d. General instruction in science, such as is afforded in the evening lectures to working men and evening lectures to teachers. To the first head the remarks in sections 15 and 16 apply; viz., that this elementary instruction must be considered an arrangement of a temporary nature, to cease as soon as the standard of attainment, on entrance, can be raised sufficiently high, and that it should, with the exception of chemistry, be given as far as possible in the evening"; would that describe the exact position of the establishment at present; it giving, as it were, an elementary course of instruction to qualify the students at another day for the higher and more classical and specific instruction given in the school of mines?—You put a question in reference to other establishments.

4196. It is a Report on the Geological Survey, Geological Museum of Mines, and Mining Record Office; it was made in 1862, and is signed by Lord Granville, Sir Charles Trevelyan, and Mr. Lowe?—I consider the general instruction in science, such as is afforded in the evening lectures to working men, and evening lectures to teachers, as quite apart from the systematic instruction which is given to our students. There are six evening popular lectures given on each subject to working men; they occupy an hour each, and are not intended to form any foundation for scientific knowledge in respect of geology and mining, or the affiliated sciences.

4197. That report contemplates the discontinuance of popular lectures when the pupils shall have acquired the information through the schools of science and art in the Department?—Allow me to say that these are distinct things; the evening lectures for working men are not attended by our students; a student might certainly, if he chooses, attend an evening popular lecture. The Department of Science and Art, Lord Granville, and the vice-president, may have the view, that this elementary teaching is of great use to their general scheme of instruction and education. That I do not deny, but it has no direct reference to us. Evening lecturing on the part of the professors is voluntary. The lectures do a great deal of good and are attended by very intelligent people. They are working well, but have no direct connection with the original objects and intentions of our establishment.

4198. Do none of the attendants at those popular lectures become students?—I do not venture to say none, but very few, if any.

4199. There is another passage in the report to which I see you call attention; it is on the same subject (*handing Report to Witness*)?—With reference to the question whether the lectures should not be given up, I think as long as our professors are willing to give these lectures they should he given, as the public in London take great interest in them. They are given in a central position, easily accessible to many working men, and are very generally approved. I do not understand the object of giving them up.

4200. The Commissioners who signed this report, Lord Granville, Sir Charles Trevelyan, and Mr. Robert Lowe, contemplate a period when these popular lectures should be discontinued at that institution, and the labours of the institution should be confined solely to special instruction in mining?—I am of a different opinion; I cannot see the advantage of omitting the popular lectures.

4201. But no change has yet been made in the institution?—Not in that respect.

4202. You have visited Ireland, of course?—Yes.

4203. Do you know the buildings recently put up near the premises of the Dublin Society, I mean two large buildings?—No.

4204. Do you know the locality of the Dublin Society?—I know Leinster House and the lawn; but all I know, in connection with this question, is the Museum of Irish Industry and the capacity of the building at St. Stephen's-green.

4205. Have these been erected, containing two large and handsome buildings, in a great degree at the public expense, on the opposite side of the lawn in the rear of Leinster House, now belonging to the Royal Dublin Society?—One of these buildings is intended for a museum of natural history, including minerals and rocks. The minerals, so far as the arrangements have gone, are arranged biologically. The opposite building was erected principally at the expense of Government. There were some small private funds which formed part of it. The building is allocated to the National Gallery of Pictures, and there is a portion, 100 feet long by 45 feet wide, on the ground floor, and 75 feet long by 45 feet wide, on the upper floor; I wish to know whether such a building would, in your opinion, be suitable in point of space for the safe preservation and efficient display of the geological collection of Ireland?—In answer to that question, I should like to state to the Committee that, three or four months ago, Sir Richard Griffith had a short conversation with me, and he put the case to me very much as you have put it, but he did not then state the size of the building.

4206. It is in evidence from Professor Jukes, the lower part of the building is 110 feet by 40 feet; part of this building had been originally intended for the transfer of Marsh's Library; arrangements have been since made to continue Marsh's Library on the present site, and the building it was to have occupied is avoided and at disposal; my question is, whether the extent of it, which it is stated at 110 feet by 40 feet in one part, and in another 75 feet by 40 feet, would, in your opinion, be sufficient for the safe preservation and efficient display of the geological collection of the country?—I must revert to what I stated to Sir Richard Griffith, which was this: that if the Government thought proper to remove our museum from St. Stephen's-green to the Lawn, and that they gave us a museum sufficiently large, sufficiently lofty, and well-lighted, to hold, not only all the geological collections, properly speaking, of Ireland, including the fossils, ores, and mineral collections of the country, that then,

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of course with provision for our officers, there could be no objection on my part; but I was then totally unacquainted with the dimensions. You have now given me the case in full, and tell me that that lower floor is to be 100 feet by 40 feet, and the upper floor 75 feet by 35 feet, and upon that point I have at once to say, that such a building would not be adequate. A room of 100 feet by 40 feet is, doubtless, a spacious and a handsome room; but as it is to have an upper story, that involves a side light all round the museum, and with that side lighting you could not have side cases or galleries; you could not, in fact, have illustrations of fossils all round the room. It would not be as in Jermyn-street. That museum is lighted by an arched glass roof, and the consequence is, that every inch of the wall is devoted to illustrations of building stones and rocks below, and mineralogical collections and ores on the second floor; and then upwards there is the whole series of all the fossils, from the lowest to the highest, which are the justification and evidence of the truth of our maps. It is impossible to have such a museum as ours in the proposed building for Ireland, geologically arranged on a strategraphical plan; for the roof above would impede all the top light. I have not examined the ground, but now that I know the dimensions, and that there is a roof that cannot be lighted from above, I have no hesitation in saying that the building would be inadequate and very inferior to the present geological museum in St. Stephen's-green.

4207. At present, the geological collection is in a building in itself and by itself, instead of being mixed up with other objects not immediately connected with the geological survey; do you consider that an advantage, in a scientific sense?—The collections of the geological survey; both in England and Ireland, are intended for one object only; any admixture with other objects, instead of being advantageous, would be a great detriment. I have been told by Sir Richard Griffith that there was no intention whatever to commingle us in any way with the Royal Dublin Society.

4208. No?—You also say, "No," but the report says, "Yes." The report which I have in my hand is to the effect that the whole Museum of Irish Industry is to be translated from St. Stephen's-green and united with the museum of the Royal Dublin Society. Now, I have heard Irish gentlemen say that Dublin ought to have but one museum. "It is really absurd," they have said, "to have two museums." But the persons who say so do not understand the objects of our special museum. It is a strategraphical arrangement, and the other being a biological arrangement, the mixing of the two would produce confusion. The words of the report are in antagonism to what you stated to be your opinion.

4209. My proposition was, merely to know your views as to the suitability of the site in question, assuming the collection to remain, as at present, under the care of Professor Jukes, as your representative in Ireland; quite free, as at present, from the control of the society; the report may have had the meaning which you attach to it, but my question did not tend in that direction?—I cannot make any further observation upon it.

4210. The geological collection is strategraphically arranged?—Yes.

4211. The collections in the Dublin Society of analogous minerals and fossils are arranged biologically?—So I understand, as regards the fossils.

4212. Assuming an adequate building to be on the site, would it not be a facility to geological students to enter one museum, and seeing the whole of the rocks of Ireland and the minerals of Ireland arranged as they lay on the surface; afterwards to walk to the other museum, and see that arranged in biological affinities; would not that be a great means of advancing the science of geology?—It would be the same advantage as if when one of our students, who has learnt his lesson as geologist, and has examined all our fossils, goes to the British Museum and sees the full developments of all species in their classes. But you must give me leave to observe that you said, "if there was a proper building." Now, I say that the building which you propose does not seem adequate.

4213. Sir *Robert Peel.*] Therefore, you might as well argue that the collection in the Jermyn-street Museum should be united with that in the British Museum, as that the collection in the Museum of Irish Industry should be united with that of the Royal Dublin Society?—Yes.

4214. Sir *Edward Grogan.*] My question was not as to union, but whether the facility of examining the rocks, differently arranged in the two museums, would not facilitate the study of geology, and give greater advantages to the students than they now possess?—It would facilitate it; but the distance between St. Stephen's-green and Leinster House is not great, and the students could easily go from one to the other.

4215. Mr. *Waldron.*] In case the upper room could be lighted from the roof, would your objection still hold with regard to the accommodation?—To answer that accurately, I should require to see the architectural plan to know the exact dimensions that would be appropriated to wall-space, that I might see how much space we should have for galleries. Then rooms would have to be provided for all the attendants and for the professors; in fact, for our establishment. Supposing you take the whole of this building, the upper part and the lower, and make a great light from above by a glass roof, then I am not prepared to say it would not do, but then you must make another building for the officers.

4216. You have been, I presume, in the museum of the Royal Dublin Society?—I have; but it is so long since that I have almost forgotten it.

4217. You have seen some good specimens of minerals and ores there?—I did not see them when I was last in Ireland, and many additions have been made of late years.

4218. There are many specimens, are there not, in the Museum of Irish Industry which might be very well added to that museum?—I think Professor Jukes has reported that he had nothing in his museum that was not requisite for the illustration of the geological survey.

4219. But, assuming that it is desirable to keep the two collections distinct, and that those which follow the strategraphical arrangement were placed in the new building, and all the others were placed in the museum which at present exists, would not that meet the difficulty you feel?—I am not aware that there is such a superabundant collection; whenever duplicates are collected, they come to us in Jermyn-street, and I distribute them, according to the privilege given me by

by the Government, to different scientific and educational establishments throughout the country and abroad.

4220. Mr. *Lefroy.*] You said that young men who came to your institution in Jermyn-street to be instructed were supposed to be, beforehand, well prepared in the elementary branches; how do you ascertain that they are so?—We never ascertain it until they have entered on their studies and shown their qualifications. If they prove by their application and the readiness with which they acquire knowledge, that they are qualified, they succeed; but if not, they fail, and do not get the recommendations and the number of marks which the professors give to those only who are proficients in study.

4221. The loss is to themselves, as it would be in any public school?—Quite so.

4222. Then you have no preparatory examination to ascertain their fitness?—Not when they come to us first.

4223. And have you any knowledge from whence they come, and whether they are well prepared?—We have no regulation on the subject.

4224. Do you know what institutions they generally come from?—They come from all parts; but I would observe, with respect to the qualifications of our young men who do take high honours, that at the last examination of the University of London, out of five young men who came from the various educational establishments of the country, and who took honours as bachelors of science, three were students of our school of mines.

4225. Sir *Colman O'Loghlen.*] Are you a trustee of the British Museum?—Yes.

4226. Can you tell the Committee if the museum has any power of giving duplicates to kindred institutions, supposing that they get duplicates of anything from other countries?—We have the power of exchanging duplicates, but we cannot dispose of other things without a special meeting at which two at least of the three principal trustees, the Archbishop of Canterbury, the Lord Chancellor, and the Speaker must be present.

4227. Or donations, supposing you ever get any, from other countries?—In respect to donations from foreign countries, I can only answer, that, in the mineral department, it is one of the points that occasionally provokes a little discussion; but we have the power of exchanging; and in old times a great number of the original bequests even were transferred. Indeed part of the collection of Sir Hans Sloane was transferred to the Royal College of Surgeons.

4228. Practically, the power cannot be exercised?—We are frequently exercising it in reference to minerals and fossils, shells, and objects of that sort. In that moiety of the museum which I specially look to we are often making exchanges for the advantage of the institution; getting minerals which we have not, and sending away duplicates of which we have too many.

4229. *Chairman.*] By the terms of your Act, I think that you only have power to sell or exchange; is that so?—We cannot part with anything except in the manner stated.

4230. But it would be, I presume, in the power of the trustees of the British Museum to lend such specimens to other national institutions as they might not themselves require?—We never lend, and I believe we have not the power to do so.

4231. But not donations or bequests?—No.

4232. Now, in case you wish to exchange any minerals in the mineralogical department, how is that done; is it done entirely upon the authority of the superintendent of the department of natural history?—No; the keeper of the department, whether it be zoology, geology, or mineralogy, makes a special report that there are such and such duplicates, naming them all; and he passes it to Professor Owen, the head of the natural history department. It is then sent to the principal librarian, who brings it before the trustees, who, after an inspection of the specimens, approve of it or otherwise.

4233. Before a sub-committee?—Before the standing committee. The standing committee transacts all the ordinary business; I am one of that standing committee.

4234. In reference to the geological collection, I presume what you require is a building amply sufficient to hold them and the staff connected with the geological survey?—Is the question with respect to the Irish survey?

4235. Yes?—Yes.

4236. Do you consider that the house in St. Stephen's-green is amply sufficient and well adapted for that purpose?—I do, from what I have seen of it.

4237. And I presume as that structure has not been built many years, you are not of opinion it would be a very economical plan to give up a building of that description, which is perfectly adapted for its object, and go to another, the qualifications of which you do not consider satisfactory?—I have already stated my opinion as to the size required, as explained to me, which might be granted to us; I have stated, under the circumstances of the construction and form of the building, that it would be inadequate to us. I am perfectly well satisfied, as well as Professor Jukes, with the present museum, inasmuch as it seems to be large enough to contain not only what we have already collected, but (what I must lay some stress on) what may be collected, and ought to be collected, if the survey of Ireland is to be pursued with ability and vigour.

4238. As head of the geological survey, you entirely disapprove of the recommendations of the committee of 1862?—I do.

4239. Sir *Edward Grogan.*] That is, the breaking-up of the geological collection?—I disapprove of the recommendations as contained in the printed report.

4240. Mr. *Waldron.*] That is, as to mixing up the two collections, is it not?—I have not been asked that question officially; had I been asked it, and had I ever been informed of the circumstances, I should have given the same opinion to the Committee of Education of the Privy Council that I now give to you.

4241. *Chairman.*] It is stated here, in this Report on Scientific Institutions, Dublin, 1862, in page 30, "as it is understood that arrangements are likely to be made for retaining Archbishop Marslis' library, in connection with St. Patrick's Cathedral, the rooms which have been appropriated for its use in the building recently erected for the National Gallery may, we hope, be used, at any rate for the present, for the Irish geological collection; and such portion of the remainder of the collections in the Museum of Irish Industry as it may be determined to keep may be placed in the new museum of the Royal Dublin Society. This consolidation should be made as a principle of careful selection.

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Only the best specimens of each class should be retained, and the duplicates should be given to the Museum of the Queen's College, or wherever else they may be of most use"; to that passage you have a decided objection?—Yes, if it recommends a consolidation of our specimens with those of the Royal Dublin Society.

4242. You do not acquiesce in the recommendation, page 26 of the report, "that it is better there should be one museum than two"?—Certainly not, as respects the specimens of the geological survey.

4243. And I presume that you consider that the amalgamation of the collection of the Museum of Irish Industry with that of the Royal Dublin Society would be very much like as if you were to amalgamate your collection at Jermyn-street with the other collection at the British Museum?—If they were to be amalgamated; for instance, if it was proposed that our collection should be translated to the British Museum, the whole of our objects would be frustrated; because we should then be subjected to a biological arrangement; all our order and symmetry would be destroyed, and all proofs of the accuracy of our maps would be set at naught. They are perfectly distinct museums. I am not now speaking of the point (which would be a considerable difficulty) of the interference of other parties not official and not connected with us, I put that aside; but, speaking scientifically and answering your question in that point of view, I think it would be a great detriment.

4244. Sir *Robert Peel.*] They are as distinct in London as you maintain the Museum of Irish Industry and the Royal Dublin Society ought to be in Dublin?—Yes, so far as our fossils are concerned.

4245. You have read this report?—I have.

4246. You have read it through?—Only those parts that specially apply to my own department.

4247. Then, you have read the remarkable letter at page 125, from the Honourable C. B. Adderley?—I am afraid I do not recollect it.

4248. I will read it. It is from Mr. C. B. Adderley to Colonel O'Donnell, and he says that Colonel O'Donnell has asked him about the commission about to sit, and Mr. Adderley replies: "I beg to thank you for the papers you have sent me, relating to the Treasury Commission now in Dublin, and to acknowledge the courtesy of the Commissioners in offering me the opportunity of making any suggestions." Then he says: "The double staff, double lectureships, double collections, double building and fitting grants, double services of all sorts kept up by aid of national taxation for identical purposes on the same spot, cause an obvious waste of resources"; do you believe that in the interests of Ireland there is an obvious waste of resources in maintaining now, in 1864, a museum of Irish industry, and the Royal Dublin Society as was originally proposed by the Government in 1845?—I do not; I believe, for reasons which I have stated, that it is quite essential to keep up our establishment as it is, with a view to the better illustration of the geological and mineral resources of Ireland; and the commixture of our specimens with those of any other museum would, I think, be very detrimental to the objects for which the geological survey was founded, and would really not in any way contribute to the advancement of scientific knowledge.

4249. And you will be surprised that a gentleman of Mr. Adderley's official position should have made a statement of that kind, clearly contrary to the objects of the two institutions?—Yes, but, Mr. Adderley speaks as a public servant, looking to the economy of the question, and probably without a view to the scientific bearing of the thing. I may say that in our mineral department in Jermyn-street there is a limited number of cases only. The minerals are condensed, as it were, with a view to the teaching of the general principles of mineralogy. I have heard persons going away say, that they have done so with a clearer idea of the classification of minerals, because they were thus methodized; whereas, in the British Museum, persons are lost in the immensity of their development. They were there arranged on so different a plan that the visitors did not acquire the same knowledge. I am speaking of the mineralogical branch of our collections.

4250. Sir *Robert Peel.*] Therefore, with a view to promote what is really the interest of Ireland, you are clearly of opinion that it is desirable that these two institutions should continue distinct as they have been?—Unquestionably.

4251. Sir *Edward Grogan.*] I believe your answer to Sir Robert Peel referred to the geological collection at St. Stephen's Green?—I understood Sir Robert Peel to ask the question as to the value of our whole collection in Jermyn-street.

4252. Sir *Robert Peel.*] Quite so?—In reference to that of the British Museum on the other hand.

4253. Sir *Edward Grogan.*] I was referring to the latter question, in which Sir Robert Peel read the passage from Mr. Adderley's letter with reference to the Museum of Irish Industry; he asked you if you considered it desirable to maintain the institution in full efficiency, and I understood your answer strictly in the affirmative?—As far as our collection goes; I do not pretend to judge of the whole Museum of Irish Industry.

4254. That was my question; your answer referred to the department in your own proper charge?—Precisely.

4255. Sir Robert Peel also put a question as to the transfer of the collection in Jermyn-street to the British museum; you object to the breaking up of the arrangements of your own collection; it would be very injurious to our scientific pursuits?—Yes.

4256. If an additional room were erected, adjoining to or part of the present British Museum, adequate and proper in every respect for the display of your specimens of the geological collection, but kept distinct from the present collection in the British Museum, would that, in your opinion, have such a mischievous effect on scientific pursuits?—I should be sorry to see what I consider to be the best building ever erected in London for scientific purposes, and the vacated institution transferred to another building, which might be hypothetically assumed to be good. We know that our museum answers all its wants. We have space enough for many years to come, and provided our museum in Jermyn-street be kept and used for its original design; we have space for the whole duration of the survey. If parts of the museum were not assigned to other uses; such as rooms for the professors and offices which might be provided for in an adjacent house, our museum, as it is, is quite sufficient for many years to come, and I should be very sorry to see any translation take place.

4257. Sir

4257. Sir *Robert Peel.*] Allow me to follow that up by a question. Supposing that room was made at the British Museum and you were carried bodily there with your stratigraphical collection, would not you and your staff of professors feel rather pained that you should be all under the officers of the British Museum, that they should have the keys of your rooms; and do you not appreciate the feeling of Dr. Jukes, and of Professor Sulivan, and others, that they would feel pained if this recommendation of the commission were followed out, and they were put under the Royal Dublin Society?—I have before stated that I think any admixture whatever of the interests of another body with ourselves would be quite irreconcileable with the promotion of our best interests. I cannot contemplate such a thing.

4258. And therefore you can appreciate the feeling frankly expressed by these professors of the Museum of Irish Industry, that they would feel hurt and pained in their professional character if they were put under the Royal Dublin Society?—We could not be put under them without an alteration of all the arrangements. The arrangements of the geological survey are such that in that case you would break up its organisation.

4259. Sir *Edward Grogan.*] Do not understand me that I am recommending the transfer of the collection in Jermyn-street to the British Museum; it was a hypothetical case that Sir Robert Peel put to you; and on that hypothesis, and putting out of view the perfect adaptability of the museum in Jermyn-street to its present purposes, I ask, supposing that collection were transferred to a room erected specially for its reception at the British Museum, and kept separate and distinct as now, and under its own officers, whether that would not be a good arrangement for scientific pursuits?—I have stated that there is an advantage in certain students being able to visit both museums. There is no doubt about that, and, I presume, your question is merely as to contiguity.

4260. It amounts to that?—It amounts to this, that there is an advantage in contiguity no doubt.

4261. *Chairman.*] Supposing you had the power of having a perfectly good structure erected in contiguity with the British Museum, do you think any advantage would be gained by that, or do you not consider that there is a certain advantage in the complete and total separation of two institutions which differ so entirely in their principles as the British Museum and the museum in Jermyn-street?—I have already stated that, in my opinion, there must be a distinct and entire separation; but, in respect to the question of Sir Edward Grogan, no doubt when students have the opportunity of going from one museum to another there is rather an advantage, I mean in juxtaposition, if accompanied by entire independence.

4262. Mr. *Lefroy.*] Or, to follow up the question already put, you said that it was generally observed amongst persons in Ireland that it is rather a waste and an unnecessary thing to have two museums in Dublin; do you suppose the persons who made those observations had any acquaintance with the different natures of these museums, or made them in ignorance of the different natures of these museums, and the objects for which they were intended?—I think they must have been ignorant of our special objects.

4263. May we understand that you think that the museum at the Green is suited in every respect for the objects for which it was instituted?—Yes, so far as our survey is concerned.

4264. And that the staff is sufficient in every degree for carrying out the objects usefully?—I think it is adequate to our present objects.

4265. And with respect to the Dublin Society's museum, though quite distinct in its objects and purposes, in your opinion, do you think, in itself, it is a valuable institution for the purposes intended in Ireland?—Certainly; but I have already said that I am very imperfectly acquainted with it.

4266. With respect to the locality, it is not that you object to; if an equally good building could be devised within the walls of the Dublin Society, you would not then desire to have the two institutions distinct from each other?—Just so.

4267. Mr. *Waldron.*] The collections rather than the institutions?—The institutions.

4268. I mean the institutions?—The institutions, most distinctly.

4269. *Chairman.*] Will you turn to page 26 in the report, under the head of general collections, commencing with museums, will you let me ask you whether you agree with the very first sentence in this paragraph: "It will be seen from this description of the actually existing arrangements, that two institutions and two systems of instruction, having the same object in view, are in concurrent operation"; is that the correct representation of the state of things at present?—I entirely disagree with it, if it means that there are two similar fossil collections.

4270. Will you go to the other paragraph, "It is, for several reasons, better that there should be one museum than two"; may I ask, is your opinion not the exact converse of that proposition, and that, for general reasons, it is better that there should be two museums rather than one?—Yes, as it seems to me to be necessary for the independence of the geological survey.

4271. Do you attach importance to the next observation: "Many persons visit one museum who will not take the trouble to visit two; by collecting all the objects, therefore, in one museum they will be seen by more people than if they were divided between two"; do you think the objects of the museums are these, that you should have a flock of people to come in and out, walking through them, and that a scientific museum should be arranged, so as to get the greatest population to pass, as it were, in a current through them?—It is quite obvious that the great mass of people who visit museums merely walk through them, and derive little or no scientific knowledge; and I am decidedly of opinion that that class of persons, or the crowd going from one museum arranged on one principle to another arranged differently would be only confused. The real students in science, who are limited in number, and working to make science a profession, can alone obtain advantages by going from one museum to another.

4272. Sir *E. Grogan.*] It is they who would appreciate the advantages?—Yes; but they are only a limited number.

4273. *Chairman.*] I will now call your attention again to page 26: "By concentrating our means and efforts in one museum, it may be rendered more complete and attractive than if two museums had to be maintained. More people are, therefore, likely to come to one museum than

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than to two, and they are likely to get more instruction from it." By concentrating our means and efforts on one museum, would that museum be more complete than two museums, as at present in existence?—I have stated before that they must be independent if our survey is to be conducted on the principles on which it has been conducted; therefore, I object altogether to this amalgamation. The word amalgamation only produces confusion in my mind.

4274. The next paragraph says, that it is more economical to have one museum than two; it is possible to have one good museum, but it would be difficult to have two good ones; I presume it is also more economical to have no museum at all than one, if we go to such reasoning?—I have no hesitation in saying that, for the advantage of Ireland and the knowledge of the structure of the country, our one independent and separate museum, arranged as it is, is essential, and therefore I cannot understand how any amalgamation with another museum, arranged on a totally different principle, can be advantageous. That the great mass of sight-seers would be more numerous where there are more things to see is obvious, by an illustration I can give not far from London.

4275. The word "economical" is perfectly misplaced under the circumstances, is it not?—It depends upon what you understand by economy. It may be economy to put two things into the same house, but if you produce great confusion and do not advance knowledge, where is the economy?

4276. Do you think it is perfectly possible to have two good museums in Dublin?—I think so.

4277. Mr. *Waldron.*] Professor Jukes was asked, "Why do you not send duplicate specimens to the Royal Dublin Society"? and his answer was, "Because I never had directions to grant them"; can you explain how it was that some duplicate specimens were sent to Scotland and none to the Royal Dublin Society?—A number of places had applied for duplicate specimens; there was no application from the Royal Dublin Society; doubtless, if there had been, some duplicates would have been sent; we endeavour to give our duplicates to different institutions according to the probability of their usefulness in different countries. We send to our colonies, as well as to Edinburgh, and I was not aware that some fossils had not been sent to the Royal Dublin Society. If the Royal Dublin Society had applied, doubtless they would have had a collection of duplicates.

4278. Then, he is asked a little further on, "Did you ever get any application from Scotland"? and he said, "No, certainly not, they would be in charge of the survey in Scotland, and they are part of ourselves"; they were sent then to Edinburgh without any application?—I wish you to understand that all Scotch collections now accumulating in a building in Edinburgh are under my direction also; consequently, between the fossil collection there and the fossil collection in England, there may be interchanges also, and the geological collection of the Museum of Irish Industry being part of our establishment, we interchange naturally. There is no occasion to doubt that we should make any exchanges that might be useful for Ireland.

4279. We understand that if any application had been made by the curator of the museum of the Royal Dublin Society for specimens there would have been no objection to give them?—There would not; but I must explain. A duplicate collection cannot possibly be made except at intervals of a number of years; it requires a great deal of time to classify, arrange, and select, so as to form such collections. It is therefore only in a certain number of years that we make a revision, and a distribution then takes place.

4280. You are acquainted, of course, with Sir Richard Griffith?—I am.

4281. Is he a high authority in geological matters?—He is.

4282. One of the highest?—Unquestionably.

Lord Dunlo, called in; and Examined.

Lord *Dunlo*.

4283. *Chairman.*] You are one of the Honorary Secretaries of the Royal Dublin Society?—I am.

4284. And I think you have taken a very considerable interest in agriculture?—I have.

4285. You are, I believe, a Practical Farmer?—I am; I have been for many years.

4286. A committee was formed, I think, in November 1860, consisting of yourself, Mr. Bayley, Mr. Saunders, Mr. Wood, and Dr. Barber, to inquire and report on the veterinary establishment formerly in connection with the Royal Dublin Society, the principles on which it was conducted, and the causes of its discontinuance?—Yes; that was on a motion which I brought before the society.

4287. And the Committee, I think, reported at end of November 1860?—November 29th.

4288. I think part of your report was, that an Act of Parliament for directing the application of a sum of 5,500*l.*, granted by Parliament to the Royal Dublin Society for the improvement of husbandry, and for granting to the society a further sum of 10,000*l.* for purposes therein mentioned, received the Royal assent on the 1st August 1800?—Yes.

4289. And that Act specially provided, amongst other things, for a veterinary institution in connection with this society?—It did.

4290. And provided for it in the following terms: "That the remaining part of the said two sums of 5,500*l.* and 10,000*l.*, and all such parts of the foregoing several sums (except the sum of 1,500*l.*, appropriated as aforesaid), as shall remain unapplied in manner aforesaid, shall be applied by the said society in procuring agricultural examinations into all or any of the counties of this kingdom, in creating drawing schools, exhibition rooms for artists, repositories for implements of husbandry and manufacture, building for a veterinary institution, and such other buildings as the society shall deem expedient; in paying a salary to a veterinary professor, and maintaining a veterinary institution"?—Those are the words.

4291. "That Act was obtained, it would appear, in consequence of a motion made by General Vallancy at a meeting of the society held on Thursday

Thursday, 30th January, 1800, relative to sundry improvements, and, '*inter alia*, above all,' of establishing a public veterinary school, so much wanted in this country"?—Yes.

4292. It was proposed that there should be rooms for dissection, and schools for cures, where various methods of cures should be tried under proper inspection?—That is the case.

4293. And it was also resolved that all foreign books, relating to the veterinary art, should be translated into English?—Yes, and that was done.

4294. And in 1800 the Speaker of the House of Commons reported, from the Committee of Agriculture, that the said committee had taken into consideration the several matters laid before the society, and agreed to report that certain houses should be appropriated for the purpose of a veterinary college?—Yes.

4295. Following up the resolution, the committee recommended that two professors of the veterinary art should be appointed, one to be professor and lecturer, the other to be a practitioner?—Yes.

4296. And Mr. Thomas Peall and Mr. John Watts were immediately appointed?—Yes.

4297. Mr. Peall was to be professor and lecturer, and Mr. Watts assistant-professor; and the lecture-system was immediately instituted on the constitution, nourishment, diseases, cures, and treatment of the horse; the lectures on the constitution, &c., of neat cattle, pigs, sheep, and dogs, to follow at such times, and in such succession, as the lecturer shall judge expedient?—They began in the following January.

4298. It was also recommended that a forge shall be erected on the premises for instruction in shoeing?—Yes.

4299. And it was also approved that on the same plan there should be a number of loose boxes for cure of horses labouring under disease?—Yes.

4300. And it was proposed that, every year, there should be a full course of lectures on the animals employed in rural economy, such as horses, pigs, sheep, poultry, &c.?—Yes.

4301. In 1801, a sum of money, about 190 *l.*, was paid to Dr. Percival, for the purchase of a veterinary museum for the use of the society's veterinary lectures?—Yes, and we have that still.

4302. And large contributions were subsequently made to the veterinary museum by Mr. Peall, which are still in good order, and available for the use of any veterinary institution in connection with this society?—Yes.

4303. In 1810, Mr. Peall's and Mr. Watts's salaries were reduced?—They were.

4304. Mr. Peall continued his lectures till 1825?—He did. Mr. Peall's salary was afterwards raised.

4305. Can you inform the Committee how it was that the society ceased to give veterinary instruction?—When Mr. Peall died, in 1825, a committee was appointed to consider what the society should do; they recommended, amongst other things, that the veterinary professorships should be kept vacant for two years, in order to accumulate the savings during that period to erect the sheds with iron pillars, which formerly stood in the grounds of the society; and this recommendation was carried out. Then, again, a motion was brought forward for the re-establishment of the veterinary institution. That was put off, and again pressed forward, and somehow or other it dropped, and we cannot discover in the minutes of the society anything further about it. That was in 1826.

4306. Then the report of this committee on the re-establishment of the veterinary institution, of which you were chairman, was referred back to the committee to inquire, and report by what means the recommendation of the committee could be best carried into effect?—Yes.

4307. They, I think, reported in February, 1861, what they considered should be the conditions of the future establishment of a veterinary school?—We made out the minimum.

4308. And you considered the minimum of what a good veterinary school of instruction should contain; viz., first, an anatomy-house and lecture-room with the forge?—Yes.

4309. And that there should be a chemical laboratory and lecture-room?—Yes.

4310. And museum of veterinary preparation?—Yes.

4311. That would refer to the material considerations; then, with regard to the staff, there was to be a lecturer on anatomy, surgery, and medicine, and a lecturer of chemistry and materia medica, and an anatomical demonstrator?—Yes.

4312. Supposing a school of medical instruction should be set up, there are many of those things which have been already provided for?—The lecture-room.

4313. You have a chemical laboratory?—Yes.

4314. And lecture-room?—Yes.

4315. And consequently there would be no additional expenditure on that account; you have also a museum of veterinary preparations, and you have a lecturer on chemistry?—And a lecturer on chemistry; and, by a slight increase to his salary, it was thought that he might undertake the materia medica as part of his duties.

4316. You made an estimate, I think, of what would be the probable expense of such a school?—We made an estimate of the minimum expense.

4317. Would you inform the Committee how much that would be?—As to the cost of the building, we had a plan of the absolute necessary building to be erected in a piece of land adjoining Clare-lane, just come into the possession of the society. The estimate would be about 700 *l.* for the necessary buildings there. The lecturer of anatomy, with salary of demonstrator, would be about 150 *l.*; and with regard to materia medica, we contemplated increasing the salary of the present lecturer on chemistry (Dr. Davey) 50 *l.* a-year; porters 50 *l.*, and contingencies 50 *l.*; making 300 *l.* a-year, besides 700 *l.* for building. Then, there was a sum of 120 *l.* a-year against this, put under the head of agricultural museum. I cannot exactly remember how that was, but I know it was a sum which had been appropriated for the arrangement and improvement of the agricultural museum for a certain number of years; and at the end of about two years, from 1860, would become available to the society for assisting in establishing a veterinary institution, or any other agricultural purposes to which we choose to apply it; and, taking that 120 *l.* off the 300 *l.*, it left 180 *l.*, which, at four per cent., would be 4,500 *l.*, which, added to the 700 *l.*, would be 5,200 *l.*

4318. And 700 *l.* would be sufficient for the building,

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building, and 180 *l.* or 200 *l.* for the expenses?—It would have been then, but I do not know that it would be now, because the ground has now the permanent horse-sheds on it; but they might be rendered available, and I daresay the 700 *l.* would do now what they thought then to do on the same spot.

4319. You consider the piece of ground adjoining Clare-lane has every advantage; a good supply of water and good sewage?—Yes, we examined it carefully.

4320. And you have space for an infirmary?—Yes.

4321. How many stalls, 10?—Ten would be sufficient, but we have space for more. I said 10 because it was recommended before.

4322. You have naturally had much communication with gentlemen throughout Ireland; do you find public opinion amongst most of the agricultural classes in Ireland to be in favour of having such an institution as we have been considering?—I think so; I do not know if in connection with the society or separate; but I see no other way of doing it, except in connection with the society.

4323. You could not have it in connection with the Royal Dublin Agricultural Society?—If we are to make a private subscription, but not for the same expense; we have nothing available in the Agricultural Society.

4324. The Royal Agricultural Society is a migratory body, and has no local habitation?—Except an office.

4325. Are you connected with the Agricultural Society?—I am a member of the council.

4326. Was there so much importance attached to this veterinary institution, that it was proposed to set to work by private subscription to carry it out in the Royal Dublin Society?—That was the only way we saw of carrying it out. We were about to commence a subscription list, when we found another body of gentlemen had set up a similar thing under a joint stock company.

4327. What was the success of the joint stock company?—It died a natural death.

4328. It shows that it was not possible to carry on this course of instruction by private enterprise?—It shows it was not so easy to organise a thing from the beginning as to carry it on. I should have more confidence in the Royal Dublin Society, where the organisation is partly formed already.

4329. There would be more elements of stability in being connected with a powerful and influential body like the Royal Dublin Society?—Quite so.

4330. Do you contemplate that, in an institution of this kind it would be an advantage if young men from the country who might be in the position of herds were sent up to obtain some knowledge with regard to the treatment of the diseases of cattle?—I should think it would be one of the most important parts of it.

4331. It would dispel a great deal of ignorant practice prevalent in the present day?—I should hope so.

4332. You think there is ample means for so doing?—There is plenty of room for improvement.

4333. And therefore I may take it that you represent a large amount of public opinion among the farming classes of Ireland, when you say that the institution of a veterinary college would be a very great benefit to that country?—I believe I speak the opinion of the farmers of all parts, and I am the more convinced that I do so, because at the time when we had this under consideration in the Dublin Society, some country papers took it up warmly, and the leading agricultural journal, the "Farmers' Gazette," was very warm in its support.

4334. You think an institution like this is well worthy of a little support from the Government?—A great deal.

4335. Sir *Colman O'Loghlen.*] Is there any similar institution in England or Scotland supported by Government grant?—There are similar institutions in London and in Edinburgh.

4336. But not supported by the Government?—I do not know if they are or not.

4337. If we had a veterinary establishment, would it be better to attach it to the Dublin Society than to the Albert Model Farm?—I do not know anything about the Albert Model Farm, but it might be attached to the Dublin Society.

4338. From your knowledge of the country, and your intercourse with different gentlemen, do you think such an institution would be popular?—Certainly.

4339. And that the want of it is felt in all parts?—Yes, it was particularly felt in 1860, when the pleuro-pneumonia was going so badly about the country, and the foot distemper in the sheep, and some knowledge of the curing art was wanted all over the country.

4340. Was not some step recently taken by the Government when the disease in sheep was so prevalent, to obtain the opinion of some private veterinary surgeon?—The Government employed Mr. Ferguson to make reports on the subject.

4341. That was a case showing the necessity of some such establishment?—I think so.

4342. And had your intention of reviving the veterinary school attached to the society been carried out the reference to Mr. Ferguson would have been unnecessary?—I think information might have been obtained through the professor.

4343. You were asked as to the propriety of attaching such an institution to the Royal Agricultural Society; I think there is no feeling of hostility between the Royal Agricultural Society and the Royal Dublin Society?—The Royal Agricultural Society would be glad to see such an institution in connection with the Royal Dublin Society, it could not be done in connection with the Royal Agricultural Society except in the sense that you might do it on your own responsibility.

4344. But if a veterinary school were to be established in connection with the Royal Dublin Society, you have many of the necessary parts of the schools?—Yes.

4345. You have premises?—Yes.

4346. All you want are some extra buildings?—Yes.

4347. Have you space for the buildings?—Yes.

4348. I thought you said that the show-yards cramped you in that respect?—We have made many additions lately, and I am satisfied the buildings, for such an institution, could have been erected on the premises at the time it was under discussion in 1860.

4349. I thought the lawn was then used for the show?—Yes; but we had not Shelburne-yard.

4350. Sir *E. Grogan.*] Have you any doubt of

of the premises being adequate for the school?—None.

4351. Have you any doubt, considering the great attention that is now paid to the breeding of all classes of cattle in Ireland, and the vast improvement that has taken place that such an institution is necessary?—I think it both desirable and necessary.

4352. I think you have been asked if there were any analagous schools to the one proposed in Ireland, maintained in Great Britain, with assistance from Government; and you said you were not aware of any?—I am not aware whether the colleges in London and Edinburgh have Government assistance or not, but I know there is no institution of the kind in Ireland at all Government aided or otherwise.

4353. You are aware that most of the scientific and public institutions are maintained partly, or what I may call solely at the expense of the State?—Yes.

4354. That is not the case with the Royal Dublin Society?—No.

4355. If the State would undertake the maintenance of the departments of the Royal Dublin Society for advancing education among the people, and allowed the Dublin Society to appropriate their own contributions, have you any doubt that one of the first objects would be the establishment of that institution?—I am certain it would.

4356. And does it occur to you that an arrangement of that kind would not only be just to the Dublin Society, as putting them on a par with other institutions in this country, but carry out the object of having the school established?—Certainly.

4357. Does that remark of yours, as to the necessity of it, apply with greater force by reason that, in the first place, at the commencement of the century the then Irish Parliament gave a grant for its continuance?—I think it is a strong matter in support of what I said.

4358. If such a school were necessary for the then state of Ireland, you have no doubt that it is more necessary now?—Certainly; these were the very words used in the reports.

4359. And does the fact of an attempt having been made by private individuals to get up a private company for that purpose, and failed, point out in a strong light the necessity for Government assistance in setting up the school?—I consider it does.

4360. I believe the subject of improving the breed of horses and cattle has latterly excited more attention in Ireland than heretofore?—Increased attention has been paid to that for many years, and it is increasing.

4361. And the increased attention you absolutely consider necessary to maintain the breed of horses?—Certainly.

4362. Would not the establishment of such a school as you mention materially tend in that direction?—Of course it would.

4363. Am I to understand from you that the reason why some active steps were not taken to establish this school, in recent times, arose from the fact of private individuals having endeavoured to do it, and you did not wish to compete with them?—We did not wish to appear to be in collision with them, consequently, about the latter end of the year in which this report was made, it was moved, seconded, and carried, that further movement concerning the re-establishment of a veterinary institution should be suspended until the society should see what this private body could do for themselves.

4364. And they failed in their endeavours?—They had not then failed; we suspended until we saw whether they succeeded, and we did not take the subject up again.

4365. You had not funds to re-establish it?—We had not funds.

4366. Can there be any doubt that the training and examination of pupils who attend the school, and the training of herds to a scientific knowledge of their profession, would be of the greatest possible use to the country?—The greatest possible use.

4367. And it is a want severely felt by the country now?—Yes.

4368. Mr. *Waldron.*] You are acquainted with the West and other parts of Ireland?—Yes.

4369. Is it not a fact that there is scarcely a town except Cork, Belfast, Limerick, and I, believe, Waterford, that has a resident veterinary surgeon?—There may be veterinary surgeons that I do not know of; if we required a veterinary surgeon in Galway we should have to send to Dublin for him.

4370. In most of the other chief towns of Ireland not one is to be found?—I believe not; I do not know of any.

4371. You are no doubt aware that the number of cattle, sheep, and pigs in Ireland, has, say within the last 20 years, enormously increased?—May I add to my last answer, that I believe there is a properly qualified practitioner at the Curragh; and there may be in other towns, but I do not know of them; I do not want to say that there are no veterinary surgeons in country towns, but I do not know of them. In answer to your last question, I say yes.

4372. And I believe they have also increased in value per head?—Yes, in quality.

4373. And is it found, from the improvement in breed and the more artificial treatment of the animals, that they are more delicate than formerly?—They require more care and skill in management.

4374. And we hear more of disease amongst them?—Disease has been very prevalent.

4375. And there is a greater necessity now than formerly for veterinary surgeons?—I think so.

4376. Now, as to the Royal Agricultural Improvement Society of Ireland; you were asked, I think, as to whether this proposed veterinary school should not be under their protection; would not the cost of taking premises and establishing a separate staff be too much for them?—I do not think they would undertake anything of the sort.

4377. And the only body that you think should take the matter in hand is the Royal Dublin Society?—I think so. The Royal Agricultural Society has a veterinary officer attached as an honorary officer, and all that is required of him is to give his opinion at shows.

4378. Mr. *Lefroy.*] Do you know of any other institution or other place in Ireland where a veterinary institution could be so well carried on, and where so many advantages are to be obtained as in the Royal Dublin Society?—I do not.

Dr. JOHN FRANCIS WALLER, called in; and Examined.

Dr. *J. F. Waller.* — 16 June 1864.

4379. Mr. *Waldron.*] YOU are one of the Crown Counsel on the Leinster Circuit?—Yes.

4380. And Vice President of the Royal Irish Academy?—I am.

4381. And you have been a Member of the Royal Dublin Society for many years?—Yes, since 1840.

4382. You were for a long time, I think, one of the honorary secretaries of that society?—Six years.

4383. You were the editor for many years of the Dublin University Magazine?—I was.

4384. And you have edited a large biographical dictionary, and been engaged in other literary works?—Yes.

4385. You have availed yourself, no doubt, of the library of Trinity College, and the Royal Irish Academy, and the Royal Dublin Society?—Every library.

4386. I believe even before you joined the society you had the advantage of its library?—I have been reading in the Royal Dublin Society more than 30 years; long before I joined it.

4387. Could you have performed your literary labours satisfactorily to yourself without the facilities of borrowing books from the library of the Royal Dublin Society?—Certainly not. Some of my works it would have been impossible for me to have written. I could not have done it by going to the library. Unless I had had the facility of keeping the books it would have been impossible.

4388. As honorary secretary, you were *ex officio* member of the library committee?—Yes; and before that. I was a member of the library committee for many years previously, and I continued very actively to take part in it when I was an *ex officio* member.

4389. Will you state your opinion as to the result of this practice of lending out the books to members of the society?—I believe the result is very advantageous to the dissemination of knowledge in Dublin.

4390. And do you think that families are benefited by their heads being able to procure works of interest and value, and to take them home?—Certainly, very much: in fact, the advantages are very great, and more than countervail any disadvantage that might arise from the temporary withdrawal of books from the library, considering it as a public library, and for many reasons: first, the books that are withdrawn are, generally speaking, different from the books which persons who come to read in the public libraries read. The class of readers in the library is generally young men, students; they read a great deal for college; they read books of science, they read books of classics, and they read histories, and they read periodicals. Now two of these classes, viz., the books of science and classics, are not the description of book much borrowed out. Books of history, no doubt, will naturally be taken home by members for themselves and their families; but of many of these first-class works of history we have more than one copy. We have copies of different editions; and, since the acquisition of the Joly library, we have been enabled to have more duplicates; therefore the withdrawal from the public library of books by lending them to the members is really much less an impediment than might at first sight be supposed. In other words, it does not withdraw from public readers the works they seek for. But, even if it were so, if every book which is lent out to a member withdrew that book from a reader in the library, the advantages would be immeasureably greater in favour of the dissemination of knowledge, by lending them out. I find that the number of readers in the day time, from 11 to 5, averages 60, and the number in the evening averages about 15, making 75 daily readers. I find that the number of members who borrow books averages 140. I consider those members are principally heads of families, and I do not think it an over-estimate to say that each member borrowing a book makes it available to five members in a family, sometimes more than that. Now 5 times 140 give you 700; this will be found, of course, to be subject to some calculations which, I dare say, have struck some of the members, and which I have not overlooked. However that gives you this, that instead of the books being in the hands of 75 persons they will be in the hands of 700 persons.

4391. Sir *Robert Peel.*] You do not really wish to impress that on our minds?—I do wish it, because I think it is valuable, *quantum valeat.* Besides, it has this advantage, that these books are then read by females in the family, a class that do not come to our public libraries generally.

4392. We understood that the books taken out of the library were more abstruse books that were not adapted to the general class of readers in the library, and persons of scientific knowledge took these away to study in their own houses; do you believe the grandmothers and mothers and children would study the books that a scientific gentleman took out of the library?—By no means. I think my evidence, if I have not failed to convey my meaning, was the reverse. It is not the scientific works that are taken out generally by them, they are left for the readers.

4393. We have had evidence that these are the books; that the abstruse books that cannot conveniently be studied in the library, are taken home to be consulted there?—It is quite true that professors and some few individuals take out scientific books. I am of course speaking in the aggregate, and I say that it is a general thing that the books taken out for families are not scientific books, because a gentleman who has three or four sons, and three or four daughters, will not take out a work on fluxions for his daughters; but a biographical or historical work, or a book of travels. No doubt a professor takes out a scientific work for himself, uses it promptly, and returns it promptly; but in my experience, the class of books generally that are taken out, are not highly scientific books.

4394. They are books of general reading?—Books of general reading.

4395. And therefore, this one member takes out a book, and circulates it among his circle of friends?—By no means, unless he is exceedingly unconscientious, but I will tell you what he does. He establishes a family circulating library within the walls of his own house, but I think that there are very few persons who would lend the books outside their own houses.

4396. It

4396. It circulates amongst the members' families?—In effect, I consider that it does this: the members establish in their own families auxiliary public libraries, which are very useful for the advancement of knowledge in the city.

4397. *Chairman.*] Do you think that the people of the country ought to be taxed in order to establish family circulating libraries in Dublin?—I do not by any means. It does not occur to me that my answer leads to that.

4398. Sir *Robert Peel.*] Because that grant of public money is about 940 *l.*, and the subscription 60 *l.*?—Just so.

4399. And therefore the library is in the nature and character of a public library?—Just so.

4400. Therefore, the force of your reasoning would go to show that the public money is given for the purpose of enabling individuals to take books, not scientific, abstruse volumes, but other books from the library, and circulate them amongst the members of their families, such as books on the culinary art, for instance?—I do not know that we have any.

4401. Sir *Edward Grogan.*] Have you any books of that kind in the library?—We have not in our establishment.

4402. Sir *Robert Peel.*] You imagine, then, that it is desirable that a library supported as I say, by public money, should be adapted to the purpose which you have now explained, family circulating libraries?—I do not think so, because I do not think what I have stated leads to such a result. This is a library I admit, to some extent, a public library, but supported, one-fifth of it, by the contributions of the members.

4403. Sir *Edward Grogan.*] The society contributes some 63 *l.* in supplementary aid of the 940 *l.*?—Yes.

4404. Is there any other public library in the kingdom assisted by private subscriptions?—Not to my knowledge. I was going to point out the difference, and explain that what the right honourable Member has stated is not a logical inference from what I said. The members of the Royal Dublin Society themselves are also a portion of the public, and I think it is exactly analogous to one other case; viz., the case of the Advocates' Library in Scotland. The Advocates' Library in Scotland is a library where the public, under certain restrictions, are admitted to read. It receives the support of the State in books, money's worth; it has a grant of every book, a privilege which is enormously beyond that of any grant which we get.

4405. Mr. *Waldron.*] That is under the Copyright Act?—Under the Copyright Act. They have that subsidy from the State, and they lend their books to their members, and their members alone. The Royal Dublin Society, instead of getting books, gets a trifle to buy books, and they have private members, and they lend their books to them.

4406. *Chairman.*] When you spoke of the Advocates' Library having a subsidy from the State, you do not surely state that the obtaining copies from the publishers is such a subsidy; it is a subsidy from the publisher?—It is a subsidy from the publishers, given by the State, and therefore subtracting a certain amount from a portion of the public.

4407. The State does not pay for this?—It does not directly, but it does indirectly; it is a subsidy given by the State. Whether the State, in giving it, impoverishes the State as a body, is another question; it is a subsidy given by the State.

4408. Mr. *Waldron.*] Is it given by Act of Parliament?—It is.

4409. Sir *Robert Peel.*] And it is also given to Trinity College, Dublin?—It is.

4410. Sir *Colman O'Loghlen.*] And King's Inn, too?—Yes.

4411. Sir *Robert Peel.*] There you have two libraries, each having copies of the works?—They receive that subsidy, but they are different in other respects.

4412. Sir *Colman O'Loghlen.*] Are they lent out in King's Inn Library?—No.

4413. Mr. *Lefroy.*] In giving the opinions which you have expressed, have you not given it with reference to the advantages derived, without looking so much to the source whence they come?—Certainly.

4414. Your object was, to give evidence as to the use to the public of this institution?—Yes.

4415. And the way in which the public derived the greatest advantage without infringing the rules of the society?—Yes.

4416. My question was with respect to the advantage of this?—Yes; and on that simple question I say simply that it would be a disadvantage to the spread of literature and knowledge in Dublin to withdraw from the members the privilege of borrowing books.

4417. In giving your answer, you had no reference to whence the supply of books came?—No; I gave it simply on the narrow question which the Honourable Member put.

4418. Mr. *Waldron.*] Now, the number of scientific readers being fewer than the general readers, the books borrowed out of a highly scientific character are, of course, fewer than those of a general character?—Yes.

4419. And, as compared with the class to which you have been referring, the scientific readers are very few?—The scientific readers are very few, except those who come in, young men preparing for college, of whom a great many read.

4420. I mean as to those who borrow out the scientific works?—I should say so.

4421. Can you say what class of readers are in the library generally?—I think they are generally young men who come to prepare for college or other professions; they read a great deal of classics, and they read a great deal of scientific works; they read some periodicals, of course occasionally; I have seen periodical books lying there; I think it right also to add that there is a class of books never lent out, or rather classes of books; I mean books of reference, dictionaries, grammars, &c., which form a very large class, books highly illustrated are never lent out, nor, I believe, the best class of scientific books; many of them are not lent out; but at all events, there are the two classes; all books called books of reference, unless there are duplicates are not lent out; I see a great many young men of every denomination apparently studying for the profession, and on inquiry I learn they are so.

4422. Mr. *Waldron.*] I think that the Catholic University in St. Stephen's-green, contributes a large number of readers?—It does, as I am informed, through the recommendation of one of the professors, who is a member.

4423. Sir *Robert Peel.*] Who is that?—Pro-

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fessor M'Swiney; I think he is a member of the Royal Dublin Society.

4424. Mr. *Waldron.*] He is one of the professors?—Yes.

4425. Does he give recommendations to the library?—Yes, he has recommended, I understand, between 30 and 40 persons.

4426. This year?—I will not say exactly within what period of time; but a great many Roman Catholics read there, I understand; there is also another professor of the Catholic University, I understand, who reads there.

4427. Do you believe the difficulties of obtaining admission into the Royal Dublin Society's library are very great?—I consider it is the most easily obtained admission of any public library I know; more easily than either the British Museum or Trinity College, Dublin.

4428. Are you doctor of laws of the University of Dublin?—I am.

4429. And know the rule of the library of Trinity College?—Yes; I have read in Trinity College constantly.

4430. Mr. *Lefroy.*] Have you ever found any inconvenience in your reading at the library, as a literary man wanting to refer to books of importance; have you found inconvenience to arise from lending books to others in the case of the books which you have required?—I have now and then; no two people can use a book together; I should have had a similar inconvenience if the books had been in the hands of a person in a public library. The withdrawal of a book from one reader is a disadvantage; but it might as well arise from a person in the library as otherwise.

4431. But has the inconvenience lasted so long as to produce interruption to your studies?—I think not; if a book has been out long it has been called in.

4432. Mr. *Waldron.*] Can anyone unconnected with Trinity College go into the library and read there?—Certainly not.

4433. How is admission obtained for those not connected with the university?—If a person is neither connected with the Universities of Dublin, the University of Oxford, nor the University of Cambridge, he can only be permitted to read by special grace on application to the Board; and then he, as well as any other reader in Trinity College, before he can read must subscribe the library oath; no person can read in Trinity College without taking the oath, whether he reads by act of grace or by right.

4434. Mr. *Lefroy.*] Could not a person read in Trinity College Library, on the recommendation of a senior fellow, without subscribing the oath?—Certainly not.

4435. Mr. *Waldron.*] Then, in fact, I understood you that even a graduate of the University must subscribe the oath before he is permitted to take a book?—Yes, to read permanently.

4436. Then persons who are not graduates of the Universities of Dublin, Oxford, or Cambridge, must make application to the Board, and after admission obtained, must subscribe the oath?—Yes, they must all subscribe the oath. If you go into the library of the Royal Dublin Society a perfect stranger and ask to read a book, it is shown to you at once. The librarian, or his clerk, will give any stranger that facility more readily than in any place I know, both in the case of a person coming in casually to look after a book, and in the case of readers in the morning; if they require any of those books which are kept downstairs, in the conversation-room for a month, they will be brought up, notwithstanding that it is considered the property of the members for a month; and he can use the book, and it is taken back.

4437. Sir *Edward Grogan.*] That is within a month?—The day it comes in it will be brought up, subject to any right a member may have; but so free a library is it, and so great the wish that the rules giving members exclusive rights, should not exclude anyone, that any books not in use by the members would be brought up.

4438. Mr. *Waldron.*] We have it in evidence that new books, when sent to the library, are engaged from member to member, so that, in fact, the public proper are not allowed to see them till, I think it is said, their interest has died out; do you believe that to be the case?—I do not; no doubt the members have a right to keep the book in the conversation room one month, and nobody can borrow it during that time. Of course the members have a right after that time to take the book themselves to read, as they get any other book to read.

4439. Assuming that that disadvantage does exist, have you any suggestion to make which you think will meet the difficulty?—I do not imagine that it may not be, to some extent, to the exclusion of the public; of course, every man wishes to get a new book as soon as he can. I have two courses to suggest; I have consulted many members of the Royal Dublin Society, and they feel that, much as they value their privileges, they would not wish to insist on them, if they could promote the public good by relinquishing any of them. Generally speaking, I am sure that the society wishes to do what is good for the public; they have shown that on many occasions, on which they have put their hands into their pockets to contribute for public establishments, such as agricultural halls; I think that the members might do this: they might waive the right to the books for the first month in the conversation-room, and send them upstairs to the library for a month.

4440. Are you representing the opinions of the members, or your own?—I am representing my own opinion, and that of others, but I do not wish to represent it as a general opinion. Others to whom I have spoken will, I believe, concur in this view.

4441. Sir *Edward Grogan.*] That is one suggestion?—The other suggestion, I think a more likely one to be adopted, is, that after they have remained a month, they might go up, and be one, two, or more months in the library, not to be withdrawn during that time.

4442. Sir *Robert Peel.*] If that be so, why did not the Royal Dublin Society adopt the resolution which was come to in 1836, after a very deliberate inquiry, presided over by Mr. Smith O'Brien; one of the resolutions come to was, that books should not be lent out of the library, and therefore the convenience of persons wishing to read should be consulted, and that persons not members should have the privilege by special permission of the council?—May I ask, is that a resolution of the Royal Dublin Society?

4443. This is a resolution in the Report of the Select Committee on the Royal Dublin Society, appointed by the House of Commons, and presided over by Mr. William Smith O'Brien;

Mr.

Mr. Lefroy himself was a member. That was the resolution come to in 1836 unanimously; and yet from 1836 to 1864, until this pressure is put on, we have never heard anything about this desire on the part of the members of the Royal Dublin Society to waive that right that they are so tenacious of, inasmuch as it establishes a circulating lending library in the families of each member?"—I beg to correct a mistake which you have fallen into. I did not represent it as the desire of any of the members; far from it; there is no voluntary desire of the sort. I represented that there are members of the Royal Dublin Society who, if it was pressed upon them, and shown to be for the good of the public, would surrender any part or the entire of the privileges; but I have not represented that they have voluntarily expressed a desire to surrender them.

4444. You stated that you had the opportunity of consulting many of the members of the society, and that they concurred in the view which you were about to express, as they were desirous of doing that which might be convenient to the public interest. They were prepared, and you were almost authorised to say that they were prepared, or at least a great majority of the members having the right of taking books from the library were prepared, if the interests of the public required it, to give up those privileges?—I do not mean to convey it as the wish of a large number of the members of the society, nor am I authorised so to do; but I said that if it was shown to be desirable, there are members who would surrender the privilege.

4445. Sir *Edward Grogan.*] Do I take the suggestions correctly, one that the books which at present remain for a month in the conversation-room should be, on the receipt of them, lodged in the library, and not go in the conversation-room for a month?—Yes.

4446. And the other suggestion is, that retaining the privilege of keeping the books in the conversation-room a month, your opinion is that they might remain then in the public library, not to be lent out to the members for two or three months?—Yes.

4447. The right of members afterwards to borrow to be revived, if they thought fit?—Yes; or there might be other qualifications of it, either abandoning or postponing our right; and, as I said before, practically, readers in the library have the reading even now of those books during the first month, because they are sent down for if they ask for them; and if a member is not actually reading them, they are brought up.

4448. Mr. *Waldron.*] On the whole, do you consider it would be advantageous to withdraw this privilege from the members of the society?—I would not, looking at it in a literary aspect; I would not, for the reasons that I have stated.

4449. Do you not think it likely that the number of persons applying to be admitted as subscribers of 20 guineas, or chartered members, as I believe they are called, would be seriously diminished if the privilege was withdrawn?—I do; or any other members, such as annual members; because I have heard people say, "I should like to have the benefit of reading books; what is the subscription? I shall join this society." I have known many men influenced in joining the society by the advantages of the library; and let me add this, that these advantages can be obtained at a cheaper rate than subscribing to any circulating library, or as cheaply. There are three guineas entrance fee, and two guineas a-year; and I believe that no good circulating library could be cheaper, and you are there liable to the same disadvantage of people having a book before you.

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4450. Can you tell the Committee what course is taken by persons wishing to serve on committees?—The course is this: there has always been a public book left in the conversation-room, a book for any person who is desirous of serving on a committee to put down his name in. That has been the invariable practice for many years; and it is the duty of the secretary every year, when the committees are being struck, to produce the book and see who are desirous of serving upon them.

4451. If I recollect, there is a heading for each committee in this book?—Yes.

4452. And a person wishing to serve on any particular committee writes his name down under the heading. Is that so?—Yes.

4453. Have you examined the book?—Frequently.

4454. And could you take on yourself to say, from the names which you have seen in it, that persons were passed over for religious or political reasons, and postponed to others?—Never. I never knew in that society of any religious, political, or sectarian feelings showing themselves.

4455. Do you remember at the moment any gentlemen who expressed their willingness to serve and were not elected?—No. I remember Sir Edward M'Donnell, one of the leading men in Dublin, and the chairman of the Great Southern and Western Railway, Mr. Lentaigne, Mr. Sweetman, and other Roman Catholics, on committees. Sir Edward M'Donnell was both on the committee and the council. I do not remember what names might have been in the book, but I know that there have been and are Roman Catholic gentlemen, to my knowledge, on the council, and several on the committees. In fact, there may be a great many more, for I do not trouble myself to learn what a man's religion is, and many may be Roman Catholics without my knowing it.

4456. You believe that no exclusion has taken place on account of religion since you have been connected with the society?—Not since I joined the society in 1840.

4457. Do you think the disposition is rather the other way, in hopes to calm the irritated feelings resulting from Dr. Murray's exclusion?—I know it to be my feeling, and I believe it to be the feeling of many others with respect to that matter. We have had Roman Catholic professors; Sir Robert Kane is a Roman Catholic, and we have at this moment four Roman Catholic officers. There are Dr. Lyons, honorary professor of anatomy; Mr. Andrew Corrigan, the curator of the Agricultural Museum; Mr. James Healy, our second drawing master; and there is Mr. James St. John, our library clerk; all most excellent officers; and with relation to Mr. St. John, I may state that he has been 16 years in that situation, and, until casually the day before yesterday, I was not aware that he was a Roman Catholic. He was elected when one of the candidates for the office, a Protestant, filled some parochial office in Dublin, and was recommended by a prelate of the Protestant church and several Protestant clergymen. Notwithstanding this, Mr. St. John was elected, and we have never had reason to regret that election.

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4458. Though he was recommended by a prelate and six rectors?—All my evidence is that he was a Protestant, and recommended by a Protestant prelate and several Protestant clergymen.

4459. Mr. *Waldron.*] May I ask you how you came to know that Mr. St. John was a Catholic?—It was in conversation with him two or three days ago; casually, he said himself that he was so. There is not a shadow of sectarian feeling amongst us.

4460. Sir *Robert Peel.*] Are you aware, with reference to that extraordinary statement made in the early part of your examination, as regards the enormous circulation of these books in the evening, that the question was put to Dr. Steele, whether the books purchased for the library principally related to the advancement of science. He answered, "Yes." Are you of opinion that books principally relating to the advancement of science would be read by the children, or by the household generally, of a member of the Royal Dublin Society, in order to make up that conclusion which you have announced?—No, nor does it follow; my statement is simply this, the number of members who borrow books is 140; I did not say that they borrowed scientific books.

4461. But it is in evidence that they are scientific?—My statement is perfectly consistent with Dr. Steele.

4462. You believe your statement to be such as Dr. Steele has offered in evidence?—My statement is this, that 140 members borrow books. I believe that it is not inconsistent with the statement of Dr. Steele.

4463. Why?—It is very evident, I think. I said 140 members borrow books.

4464. Amongst how many did they circulate, did you say?—Amongst 140 members; and I have said this, that they are generally heads of families; and it is a fair thing, and not an extreme average, to say, that there are five persons, viz., the member himself and four others of each family, who participate in the books so borrowed, which I consider is circulating them amongst 700 persons, not books; these are books recently published, and older books.

4465. Dr. Steele says that these scientific books are taken from the library, to afford the valuable privilege to the members of studying, when the occupations of the day are passed, these abstruse volumes; is it probable that these abstruse volumes should be circulated amongst the wives and children and household of the members of the Royal Dublin Society?—My conclusion does not touch the question at all. I say 140 members borrow books, and that there may be three or four, 10 or 20, who will borrow a certain character of scientific or popular works on geology, or natural history; and many others borrow books of history, such as "Prescott's," and other modern books. There may be, also, professors there borrowing.

4466. The inference you deduced was, that the advantages derived from the library were not confined to the 140 members, but circulated amongst 700 people?—Yes; I say these books, be their character what they may, circulate in the family of those who borrow them; I estimate that at an average of five. I think it fair you may say that any book which is a highly scientific work, is not read by all the family, and it is not likely that the young ladies participate in that advantage; that might, perhaps, reduce the average to four.

4467. The generality of books are of a highly scientific character?—I think not.

4468. Sir *E. Grogan.*] You have yourself, I believe, taken great advantage of the privilege of borrowing books?—I have.

4469. Are the books you have generally taken highly scientific or general literature?—General literature; I am like many others who do not borrow highly scientific works.

4470. If a professor or any gentleman pursuing a highly scientific study should borrow books of that character, do you mean to say these books would be read by the other or female members of the family?—No; I speak of an average of five.

4471. The general class of books which you borrow, and which many members likewise borrow, are used for the general instruction and improvement of the family?—Yes.

4472. What was the object of placing the books in the library, to lock them up?—Certainly not; it must not be forgotten what the origin of the library was; it was got up for the collections and the professors, but gradually it was enlarged.

4473. The books purchased are purchased for disseminating education among the people generally?—I suppose so.

4474. And in your opinion a work of general literature, or general information borrowed by a member of the society, and read by his family, while in his possession, is of more general use than hoarding it in the library of the society, possibly to be called for?—I do not exactly wish to draw that inference from it; I think it a very good and economical use of a book, and that it is an excellent way of circulating the knowledge in the book to allow the member to borrow it out; it would be a very different thing if the statistics showed that instead of 60 readers daily, there were 600; and instead of 15 in the evening, 150; the balance would then be the other way; I take facts, and give figures, and I think the conclusion irresistibly does go to the economising of the book, by allowing the member to take it; it is not altogether a public library; the persons who take advantage of it, on an average, are 60 in the morning, and 15 in the evening; if that was to be multiplied 10 times the balance of convenience would be the other way; if it were a great public library it might be a great disadvantage to lend out, but it is small, and I think the best way to utilise the books, is by doing that which has been done; whatever we have expended on the library has been laid out in the most frugal manner.

4475. You have been connected with the society many years?—Yes.

4476. Is it within your own knowledge that complaints have been frequently made by members or readers, of the inconvenience resulting from the practice of lending out books?—It is not; I have sometimes heard complaints of a man keeping a book too long, and which it was important should be returned; I never heard such complaint, but others may have.

4477. If that inconvenience was felt generally either by the members or the readers from the privilege of lending out the books, would it come to your knowledge?—Yes, it might.

4478. And you have not heard it?—Certainly not.

4479. You have used the phrase "family circulating library;" do I understand by that, that when a member borrows a book, that such book

is

is read out to other members of the family, or that they shall have the power of reading in the book?—It does not circulate beyond the family circle. I think I said, "family public library;" I mean it was not to circulate out of the four walls of the house.

4480. I wish to direct your attention to this: will you be kind enough to read the passage?—"They, however, find that since the Union only four persons have been excluded, whilst 887 have been admitted."

4481. What is the passage quoted from?—This is the Report of 1836, on the Royal Dublin Society.

4482. It is the same Report to which the Right Honourable Member called your attention before, on the subject of lending books?—It is.

4483. And it says, "Since the Union only four persons have been excluded, whilst 887 have been admitted." Do you think that a negation of the existence of sectarian feeling from "the Union to 1836?"—I do.

4484. From 1836 can you speak yourself of the non-existence of such feelings?—No, but from 1840 I can positively. I remember a good deal of feeling in consequence of a very deplorable rejection of a most worthy person; I remember that, and that we all deplored it, and always have.

4485. In point of fact, the whole period from the Union is covered, with the exception of four years?—I think so.

4486. Mr. *Lefroy.*] If you have given an opinion on Trinity College Library contrary to that expressed by Dr. Lloyd, would you feel that you must be mistaken?—Indeed I would.

4487. With respect to the library of Trinity College, Dr. Lloyd says (Question 3972), that it is not open to the public, but that it is open to all students of a certain standard, not merely to graduates, but students in the third year. Would you, in your opinion, have said the library was open to students in their third year?—Yes.

4488. I thought you said that all persons reading there must take the oath first, and those who were not graduates of the University must apply to the Board?—I do not think I said that; but that it was open to graduates of Cambridge or Oxford; of late years the privilege has been enlarged. Formerly only graduates of Trinity College were admitted, but now, in their third year, under-graduates are admitted, but they must take the library oath. You may walk into the library and say, "I am a stranger; show me a book:" but the library clerk dare not show you a book, because he would be violating an oath; so that, I do not think, under any circumstances, anybody can walk into the library of Trinity College and ask for a book to see it.

4489. Could he not do so on the recommendation of two Fellows?—But I am talking of walking in.

4490. What I want to put is, is it not possible for two Fellows to give admission to the library, and the person receiving that permission to read in the library without his having been a graduate of any of the Universities?—Certainly through the Board.

4491. He may?—Certainly. I believe by the recommendation of two Fellows and the leave of the Board, but he must take the library oath.

4492. Even with the order?—Yes.

4493. Mr. *Lefroy.*] Has not the library been opened in this way, that anyone can be admitted on the recommendation of two Fellows, that recommendation being brought before the Board?—True. Dr. Lloyd is right and I am right. He does not go so far as I do in following out all the machinery.

4494. Mr. *Waldron.*] Your impression is, that no person can be permitted to read there until he has taken the library oath?—My impression is, and I believe it to be the fact, that you could not be permitted to walk in and ask for a book for five minutes without taking the library oath, or, doing this, which I understand is done occasionally: a person would walk in and ask for a book; he would be asked, "Have you taken the library oath." "No." The library clerk would take him to Dr. Fisher, and he would walk up and perhaps let him see it for a time. Of my own knowledge I do not know that it is done, but I have heard.

4495. Sir *Robert Peel.*] What is the oath of a person who applies to read and study in the library of Trinity College;—It is a long time since I took it, but I think it is not to spoliate the book, or ill-use it, or take it away. It is necessary for the conservation of the book.

4496. Is it administered on the Testament?—I suppose so. Graduates generally take it at the time of graduation.

4497. Is every stranger coming on the recommendation of two of the fellows obliged to take the oath on the Testament?—I cannot say experimentally. I never took it except as a graduate.

4498. Mr. *Lefroy.*] If a stranger not a graduate in a university goes into the library with the permission of two fellows or the Board, is it necessary for him to take any oath?—I believe so, as a permanent reader, but I do not state it as a matter of fact.

4499. Sir *Robert Peel.*] He must take the oath?—Yes; every graduate does, and I do not see why there should be relaxation to a man who is not.

4500. *Chairman.*] Do you mean that they take an oath on the Testament?—Yes.

4501. Sir *E. Grogan.*] You are giving your impression as to the admission to Trinity College, Dublin and that is all?—Yes; I believe every reader takes the oath.

4502. You do not speak from authority or from absolute knowledge of the rules and regulations?—But I have heard it, and have no reason to disbelieve it.

4503. Mr. *Waldron.*] You speak of what was in force when you became a graduate many years ago?—Yes, and a graduate takes the oath now. I do not doubt anything Dr. Lloyd has said, but I believe what I have said is right.

4504. *Chairman.*] There is no public library, I think, in Dublin?—There is Marsh's and this.

4505. But that is a library of divinity, is it not?—Yes.

4506. And the library of the Royal Dublin Society is almost the only library which assumes the character of a public library in the metropolis of Ireland?—Yes.

4507. Do you not think it is exceedingly important that there should be a library for reference in the metropolis of the country?—I think it is exceedingly desirable that the State

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should make provision for a public library in Dublin.

4508. Are you aware that a previous witness stated that on many occasions professors from Queen's College, and persons who were engaged in literary research, had come up to Dublin for the express purpose of consulting books in the Royal Dublin Society, and that they were unable to do so in consequence of the book being taken out for private members?—I am not aware that such evidence has been given; I am aware of it, as I read it in the papers, that persons had come up—professors from Galway, by no means for the purpose of consulting the library, but for other purposes, and while there, it was stated that they looked for some books, and did not get them. I am not aware it was ever given in evidence that persons came expressly from Galway to consult the Royal Dublin Society's Library, and that they could not get the book they wanted.

4509. At page 8, of Dr. Wright's evidence, he says: "I have known instances of professors, especially from Galway and Cork, who have come up to Dublin to consult the books, and they experience great inconvenience from the books required, and which they saw in the catalogue, not having been in the library"; and Dr. Wright is asked this question by Major O'Reilly: "Have you known instances of that yourself?" Dr. Wright replies: "From time to time, I have known several instances." Do you not think, therefore, very great inconvenience must result to some persons from this privilege?—Has he not qualified his statement shortly after, by saying that they did not come up from Galway for the purpose of consulting the books, but they came up, and when they were in Dublin, did consult the books?

4510. I think you had better answer my question. If this be the case, must not this entail very great inconvenience to persons from the country?—If it be the case, that persons either from a distance, or from next door, come to consult a book in the library of the Royal Dublin Society, and do not get it, it is of course an inconvenience to them. I say it is an inconvenience to any man not to get a book when he asks for it, no matter where he comes from.

4511. Mr. *Waldron.*] Let me draw your attention (at 4130) to a passage in which he qualifies that answer?—I thought it was so. "They called to see them, and had the lists, and wished to avail themselves of the books they saw there." That is my impression.

4512. At 4126 we have, "Such as at the yearly examinations; there were many Queen's professors in town, and many happening to be university men or friends, they asked me to take them to the library"?—I thought so.

4513. *Chairman.*] He says, "I have known instances of professors, especially from Galway and Cork, who have come up to Dublin to consult the books, and they experience great inconvenience"?—Of course, I am free to admit this, which is little more than a truism, that if a man looks for a book and does not get it, it is an inconvenience; it also follows, that the other persons may be as highly convenienced as those referred to are inconvenienced.

4514. It is useful to persons resident in Dublin; the convenience of this system of lending out books is very much in favour of persons resident in Dublin over those resident in the country?—The convenience of the books in the library, whether they be lent out or read on the premises, is greatly in favour of those near the library, in preference to those far from it.

4515. Mr. *Waldron.*] Does not, in fact, the privilege of borrowing a book enable a country member to take the book home, whilst if the privilege be limited to reading, the advantage would be confined to inhabitants of Dublin?—Yes; for instance, the railway offers great facilities for sending books 10 or 12 miles from town; there is nothing to prevent a member in Cork taking a book and returning it within the prescribed time, if he wished.

4516. *Chairman.*] Are you aware also that a witness has stated that persons have taken out books for the express purpose of instruction in classes; that persons called by the term of "grinders" have taken out books for the purpose of teaching their classes?—I am not aware that such evidence has been given, but it may be perfectly true. There is no good rule, however, that may not occasionally be violated; and even if such a thing had taken place, it does not appear to me to militate very much against the advantages of lending out.

4517. Do you think it is for the advantage of a public library that persons should take out volumes for the purpose of instructing classes?—I would not venture an opinion on that. It might be a great advantage. He might be teaching with the books a vast number of persons, being too poor to buy it.

4518. Do you not think it better for teachers to purchase books for the instruction of their classes, rather than go to a public library?—As a question between the teacher and the society, I think he would do better.

4519. You have stated an average of 140 members who borrow books from the library of the Royal Dublin Society; how do you arrive at it?—By making inquiries in the Royal Dublin Society for the purpose.

4520. How is that average struck?—I did not ask the party how he ascertained it. He said he looked through the papers or receipts that are given; I asked him to find out for me, as near as might be, the average number of borrowers. He gave me the reply in two or three hours, after he had gone through the process to get the information.

4521. You obtained that information from a party, but he did not inform you the exact mode in which he calculated?—He informed me he went through the papers, the receipts of the members for the books. Every member who borrows a book signs a receipt for that book, and the receipts are deposited alphabetically in a large case. He puts them down under the various names, so that it is readily ascertainable in the library what number of books are out, and who has them.

4522. Sir *E. Grogan.*] You believe the figures were obtained from totting up the receipts for the books out?—I believe it.

4523. Who gave you the information?—The library clerk.

4524. Mr. *Waldron.*] Did you see the process?—I saw part of it.

4525. *Chairman.*] And you have made a calculation of 140 members who borrow, they appearing on the receipts?—Taking the average.

4526. And taking the average of 140 members, you

you take them all to have wives and little ones? —No. If I thought so, in considering the characteristics of Irish gentlemen, perhaps I should take a higher average.

4527. Do you take it that all these 140 are married men, and have children?—No; I am taking the average. I am willing to take it at four.

4528. As you have entered into statistics, would it not have been advisable to have ascertained from the clerk whether the 140 gentlemen were married or single?—I think it would not have been so; probably I should have got an unsatisfactory answer, for I do not think our library clerk goes into the statistics of the social life of the members, and he could not tell who were married and had children.

4529. Do you think you are justified in assuming that the 140 members are all married, and represent five people?—I have not stated that; but I have stated that the average was five. One may be married and have 10 children, and another may be married and have none.

4530. Are you not aware that, as a general rule in all public documents, the average of families is taken at five?—I may be wrong; I am content to reduce it to three; some would be unmarried.

4531. Do you take it that every one of these 700 people would be reading the same book?—I do not think so; why should they be reading the same book when I give 140 members, and each can get three volumes.

4532. Do you think that the books taken out by the members would be read by all the family? —A member borrows three volumes. They may be three works, and, as he has them from morning till night, I think it very likely that many of the members of the family participate in the advantages of the books during the 12 hours of the day.

4533. That they all read?—Some will read at one period and others at another. The father might read in the evening to his children.

4534. I think you have also attached importance of females having the power of reading?—I have said that I think it is another of the advantages arising from lending out the books, that the female members of a family have the advantage of them, and it is not their habit in Ireland to go to public libraries.

4535. Are you aware of the words of the committee of 1836, upon this very point, with regard to the wives and female relations of members of the Royal Dublin Society having access to the books of the society: "Your committee are of opinion that the disadvantages arising from the practice outweigh the advantages arising from it. It induces members of the society to desire the introduction of works into the library of that light and amusing description naturally interesting to females;" do you think that follows from the practice of lending books?—I am not aware of that, the committee, of course, have their opinion. I do not think there are light books purchased, and I know there are not.

4536. You do not agree with the opinion of the committee that the lending out of books, and the reading of them by the female members, is likely to introduce light and amusing works; is that so? —I do not disagree with them, but I say that, as a matter of fact, it is not so. If it has that tendency it has not operated.

4537. You have stated that the 20*l.* subscribers would feel themselves very much aggrieved if the privilege was taken away?—I did not state that. I said it was a privilege they valued, and also, that I thought it would diminish, in future, the numbers both of life members and others.

4538. You said it would diminish the number of life members and others; but have not the life members and others had ample notice from the recommendation of the Committee of 1836 that the Government might interfere in the matter in this way, and compel an alteration in the rules of the society?—I presume such as ever read that— perhaps five per cent. did not read it—may have thought that though the Government had intimated an opinion, it was unlikely that they would carry it out. I cannot speculate on what they may have thought on the matter; many may have thought it unlikely that the privilege would be withdrawn; at all events it was not withdrawn.

4539. You are aware that all the recommendations of the Committee of 1836 have been carried out?—I am not aware of it, but I believe it.

4540. With this exception?—I believe so; I do not wish to commit myself; perhaps they have; my impression is that they have.

4541. You do not know?—I do not know; the fact cannot be influenced by my knowledge or ignorance.

4542. Do you say no?—I do not know whether they have or not.

Mr. W. Andrews, called in; and further Examined.

4543. Sir *E. Grogan.*] When you were last under examination I put some questions to you with reference to the richness and variety and extent of the fossil specimens, and their arrangement, in the Royal Dublin Society, and I will read to you the last question: "It is the latter mode which has been adopted, as far as it has gone, in the Royal Dublin Society, and you think it the preferable mode?" You replied, "It is the most useful for reference; the other is most useful for teaching, in a geological point of view." That referred to the biological arrangement?— Yes.

4544. Have you any doubt whatever, that two collections of minerals and rocks, one arranged stratigraphically, and the other biologically, within a convenient distance of each other, would be the most convenient for inspection and advancement in geological knowledge?—I have no doubt of it.

4545. The pupils would see the rocks, as they lie on the surface of the earth, in the one, and their useful application in the other?—The arrangement, in the Museum of Irish Industry, to which Sir Roderick Murchison and Professor Jukes refer is arranged stratigraphically; but in the Royal Dublin Society, what was proposed is to arrange it according to zoological affinities; that is a different arrangement from the other.

4546. Do you consider the two collections would throw light on each other, in the instruction of the people?—Yes; because the professor of mineralogy could not give his lectures properly without referring to geological specimens for practical reference and practical instruction.

4547. And the same objects, arranged in different

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ferent forms in the two collections would act and react on each other usefully?—Yes; and they are necessary.

4548. You are on the committee of the museum?—I am chairman of the committee.

4549. That museum comprehends many other objects of natural history besides those connected with geology?—Yes, and a very extensive arrangement.

4550. I believe there have been a large collection of skins, and specimens of that kind, sent to the museum, that you are at present unable to display, or prepare for exhibition, or even to protect?—In the main body of the hall, at the front entrance, the walls are entirely bare; and no arrangement of geological specimens and fossils belonging to the society can be made. Then there are the skeletons of large animals, the arrangement of casts of fishes, and models of boats for fishing, have not been put up. In the upper part, where the mammalia are, many are unarranged for want of cases and proper protection. There are 2,099 birds set up and arranged in a systematic manner, and 2,500 in cases, which cannot be arranged.

4551. Amongst this large number of specimens, let me ask, as a general question, are the objects principally obtained by purchase or donation?—By donation; a very limited number by purchase.

4552. I understand that very little of the funds of the society is expended in the purchase of these specimens?—Very little of the funds; not more than 370*l.* in the last ten years for anything in connexion with the museum, all the rest has been donation.

4553. A very valuable and unique collection of birds has been presented to the society by Sir Leopold M'Clintock?—A very valuable collection of Arctic fossils and animals has been presented by Sir Leopold M'Clintock, which only to a limited extent, have been put up.

4554. Are they unique?—The fossils are unique.

4555. And you are unable to set them up either for display or instruction, for want of funds to complete your arrangements?—Yes.

4556. Is the collection deteriorating from being confined in cases?—Of course, they require the constant care of the director of the museum who has little assistance, and they must, more or less, deteriorate.

4557. What is the actual state of the museum at this moment?—As I mentioned, at the front entrance of the hall, the walls are naked. There was an estimate of 350*l.* or 360*l.* for completing the walls and arranging the cases round the body of the museum, and also for tiling the ground floor of the museum. The tiling has been completed by the Board of Public Works; the whole of the body remains naked for want of cases, and the arrangement of the valuable specimens. We have some valuable fossils. The upper part has not above a fourth arranged where the birds are; the collection of native birds, in cases, has not been put up at all.

4558. If it were possible to suppose the state of things which exists in Dublin, in regard to the large collection of fossils applied to any case in this country, did you think the people of England would take it so easily?—I am certain they would not.

4559. Do you think the guardians and curators of the British Museum would allow such a collection to remain deteriorating for want of necessary things to set them up and exhibit them?—It would be but a short time before such a collection was arranged satisfactorily; the trustees of the British Museum would take steps to remedy such a grievance.

4560. You think it is an injustice to the people of Ireland?—It is considered that a museum so long in existence as the Royal Dublin Society, to be left in its present position for so many years, and being the only museum of reference in Ireland, is a strange circumstance.

4561. Am I right in saying that a large portion of the objects to which you referred have been donations?—Nearly entirely, with the exception that within about the last 10 years about 300*l.* has been laid out in purchases; but the greater part have been donations, and valuable donations, by persons who take great interest in the society, such as Sir Leopold M'Clintock, and persons from different parts of India, and other countries.

4562. If those persons who have made these donations find their valuable presents have been treated with such neglect, is that an inducement to others to make donations?—I should think not, and that it would be very injurious to the society.

4563. If you wished to diminish the donations to the Society, could you devise anything more adapted to do so?—I think the persons who send the donations do so in the hope that the specimens will be neatly arranged, instead of remaining as they have, packed in cases.

4564. What is the assistance in the department?—There is only one boy assisting the director of the museum. The director is Dr. Carte, who has under his charge and preserves the specimens, and does all the duty of the museum.

4565. Do you think one curator and a boy are adequate for the proper preservation and collection of the specimens?—It is impossible.

4566. A minute estimate has been handed in by the secretary of the Royal Dublin Society of the sums that would be required to place the institution in full and efficient working; in that estimate is there any provision for increasing the assistance in your department?—I think there is; two assistants in the museum, and one taxidermist.

4567. What is the proposal for the management?—There is only an assistant and one porter now. I believe the committee originally recommended about 2,000*l.* as necessary to keep up a museum of that kind, the only museum of reference in Ireland; but it was reduced, by an amended estimate, to 1,750*l.*

4568. Among the other objects connected with the museum I believe there are some valuable specimens of the fish of the country?—Very valuable.

4569. There are casts and specimens?—In particular a valuable set of casts presented by Trinity College to the Royal Dublin Society.

4570. Recently?—Very recently; and they are all to be put up, and require some expenses for their arrangement; they are admirably adapted for the display of the icthyology of the country.

4571. The very valuable collection of casts presented by Trinity College will occasion expense

pense to set them up, and you require the funds to exhibit them?—Yes.

4572. Although they are a present from the college?—From the college; and there are besides a very large number of valuable specimens of fishes and reptiles, which cannot be put up.

4573. Is the museum largely resorted to by scientific people or the public?—It is the only museum in Ireland of the kind; and great numbers come to it for purposes of reference, and seeing the collections.

4574. And examination?—And examination, because the director is there from twelve to four each day; and all the specimens that can be displayed are shown, and every information given.

4575. If any person wished to examine (that is, so far as they could examine through a bottle of spirits) any particular specimen, every facility is given?—Every facility is given, whether he is a member of the society or not.

4576. He has only to apply to the director, and every facility is given?—Every facility is given.

4577. Do you consider the specimens indispensable to the teaching of the sciences to which they relate, by the professors?—They are indispensable; they cannot be done without, because they are really necessary for the promotion of science in the country, and the understanding of everything connected with the sciences and the industrial resources of the country.

4578. And is the converse true that the museum, without professors to explain it, is useless?—Comparatively useless.

4579. In the one instance it is a great object of curiosity, and in the other it is matter of instruction. Is it within your knowledge that the facilities for the examination of the Royal Dublin Society's collections have in any way affected the turning of public attention to science?—Very much indeed; I can relate many instances.

4580. The original institution of the society was for the cultivation of useful knowledge, and the improvement of the people in the arts and sciences?—The improvement in practical husbandry and the resources of the country, and the arts and manufactures.

4581. Their collectors and professors have mainly conduced to these results?—Yes.

4582. The professors use the specimens in the collection for illustrating lectures?—Yes.

4583. We have heard a great deal about the separate committees connected with the Royal Dublin Society; how are they appointed?—The several committees are selected from the best men among the members. There are 17 for each committee generally selected, and they are brought before the general meeting of the society, and 11 of these names are selected.

4584. They are selected, then, by the general society?—The general society at large.

4585. And is every due care taken, as far as your knowledge goes, to select gentlemen for the different committees peculiarly qualified by their previous studies and labours?—Yes; because the names of those most competent to fill offices on the different committees are put down, and they are invited to join as being the most useful men, and if they join they are returned for election.

4586. In the selection so made, and the election of them by the society at large, the capability of the gentlemen is alone the object?—That is alone the object; there is no other object.

4587. There is a small sum, I believe, placed at the disposal of each of the committees for the arrangement of their departments?—For the arrangement of their own departments.

4588. If you find it necessary to make a purchase, is the committee competent, or must they refer to the council?—Do you mean the committee, or the director of the museum?

4589. The committee first?—The committee have the power of making any purchases they think necessary out of the funds at their disposal, without reference to the council.

4590. What control does the council exercise over the committee?—Merely to ask it at any time to submit the minute book, and ask questions with reference to the duties of the committee, and the council may do so on one day in each week, with the chairman and vice-chairman of the committee representing the committee at the council? but the council do not interfere with the management of the committee, or their acts.

4591. Is there a small sum placed at the disposal of the director or curator of the museum for the purchase of objects that may occur to him?—The director may purchase to the extent of 5 *l.*, without reference to the committee; as it is desirable to know what funds are at the disposal of the director, he generally refers to the committee; but there is no impediment in the way of his purchasing anything for the museum.

4592. He is not hampered by rules of the committee or council?—No; so far from that, the director of the museum has often stated to me that he does not wish to exercise that power, but rather to have the committee between him and any difficulty in the matter, so as not to have any responsibility resting with him.

4593. Does your answer apply exclusively to purchases or to exchanges also?—Purchases, exchanges, and everything else.

4594. It has been stated in evidence, that if it is desired to make exchanges of certain specimens which are considered valuable, that the director or curator of the museum of the Royal Dublin Society is so hampered by the rules and regulations, or reference to the committee for permission, that there is such delay that the exchange could not be made; is that the case within your knowledge, or do you know of any cases like it?—No cases like that have come within my own knowledge; the director has several times stated to me, as chairman of the committee, that he would not wish to have such responsibility. Dr. Steele, since the last day he was here, has made a reference to Dr. Carte upon the matter.

4595. Dr. Carte is the gentleman referred to in Dr. Wright's answer?—Yes.

4596. Do I understand you to say, that the evidence of Dr. Wright in this room induced Dr. Steele to write to know the facts of the case?—Yes; but at the same time he was quite satisfied as to what I had stated that Dr. Carte had mentioned to me that he would not desire any responsibility of the kind to rest with him.

4597. Dr. Carte, in reply, sent a letter to Dr. Steele?—Yes.

4598. And that letter you propose to read?—Yes. Dr. Wright, I believe, stated that there was so much time lost about the specimens, that it was difficult to get anything by means of the

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director without the committee. Dr. Carte refers to these subjects in his letter which I will read:—"Department of Natural History, Royal Dublin Society, Kildare-street, 15th June 1864. My dear Steele,—In reference to the question which you put respecting the specimens of Coleoptera Dr. Wright asked for, on referring to the natural history committee book, I find the following entries, "Wednesday, 18th February 1863, read a letter from Dr. Wright, requesting the director to give him two specimens of Coleoptera in the collection which were presented by Mr. Furlong, and which he claims as his property: *Resolved*, that the letter be referred to Dr. Carte for his report thereon; again at the next monthly meeting of the natural history committee, dated 18th March 1863, I find the following: "Dr. Carte having explained in reference to Dr. Wright's application submitted on 18th February 1863: *Resolved*, that the directors be authorised to hand Dr. Wright the specimens of Coleoptera which he claims as his property." It is my impression that Dr. Wright would have got the specimens at once on the 18th February had I been present, but unfortunately I was not able to attend the Committee on that day, being laid up with an attack of influenza, and it was in consequence of this that Dr. Wright's application was referred to me, as you will perceive by the entry of the 18th February, the very next meeting held by the Committee, I was authorised to give him the specimens. In answer to the second question in your letter, I do not consider that I have ever been hampered by the natural history committee, on the contrary I have always found them most anxious to carry out any reasonable suggestions, and in the matter of exchanges consider that I have power to do so within moderate bounds, but for my own protection I am not inclined to make use of it except in trifling matters, and whenever necessary, I can have a special meeting of the committee within two or three days at any time; I hope I have given satisfactory replies to your questions, but if I mistake not, Andrews can answer all such questions without hesitation. Yours very sincerely, Alexander Carte. William Edward Steele, Esq., M.D.

Lunæ, 20° *die Junii*, 1864.

MEMBERS PRESENT:

Mr. Dillwyn.
Mr. W. H. Gregory.
Sir Edward Grogan.
Mr. George.
Mr. Lefroy.
Mr. O'Reilly.
Sir Colman O'Loghlen.
Mr. Waldron.
Mr. Leader.

W. H. GREGORY, Esq., IN THE CHAIR.

Dr. J. F. WALLER, recalled; and Examined.

Dr. *J. F. Wallre.* 20 June 1864.

4599. *Chairman.*] Is there any portion of the evidence you gave before the Committee at the last meeting, which you would wish to explain or alter in any way?—Yes, there is one point; I do not know whether there is any other, for I have not yet been able to read my evidence. I stated on the last day in relation to the manner in which readers were permitted to read in Trinity College, Dublin, that all persons permitted to read permanently had first to subscribe the library oath; I find that, as in many other cases, a declaration has been substituted for the oath. With that exception, my evidence on that subject I believe is substantially and entirely correct, so far as I have been able to read it at present. I had intended to state the precise terms on which the admission was given; but seeing Dr. Todd, the librarian of Trinity College here, he would of course be a much fitter person than myself to do so.

4600. Mr. *George.*] Is that declaration, to your knowledge, still required?—It is the declaration that has been substituted for the oath, and it is required from the class of persons I mentioned on the former day. I may as well hand in the rules, or perhaps they will come in with more propriety from Dr. Todd.

4601. Mr. *Dillwyn.*] I understood you to say, that there were no corrections which you wished to make in your evidence, so far as you know; but you have not had an opportunity of reading the evidence; may I ask you if you gave your evidence on the last occasion on matters within your own knowledge generally, or matters of hearsay or opinion as these appear to be?—With respect to the last observation you made, this was not a case of hearsay, it was a matter of knowledge to me as a graduate of Trinity College and a constant reader therein. The only error I made was in speaking of the practice that formerly existed, viz., taking the oath, which has been since qualified, as in the case of other oaths, by taking a declaration. Therefore, that was not a matter of hearsay; my evidence altogether was partly matter of opinion and partly matter of fact. I spoke from my own knowledge of many things, and I spoke from my own opinion of many things.

4602. Mr. *George.*] Was the substance of your evidence intended to convey that there was an obligation of some kind imposed on graduates of Trinity College, before they were allowed to read in the library?—An obligation of some sort on every permanent reader. There are the graduates of the Universities of Dublin, Cambridge and Oxford, the students of Trinity College, who have passed their final examination for senior freshmen, and remain on the books; and persons admitted by order of the Board, on the recommendation of two fellows of Trinity College. These form the classes that may be permanent readers, and it is a condition precedent with all of these, now, that they shall subscribe a declaration substituted for what heretofore all had to do, to take an oath; that is accurately what I said on the last day.

4603. Were you under the actual impression that an oath on the Testament was still administered, or were you merely describing the old practice without reference to the Act of Parliament?—Yes; at the moment I had forgotten that in almost all cases the oath is abolished.

4604. I repeat, that the substance of your evidence was meant to be that an obligation of some nature was required from every permanent reader frequenting the library at Trinity College?—Plainly; for I was contrasting the extreme facilities of reading in the Royal Dublin Society as compared with the library facilities of Trinity College, Dublin.

4605. Mr. *Lefroy.*] You have consistently explained the mistake you have fallen into, by which the Committee were a little led into error; you alluded to the oath which had originally been taken?—And which I took.

4606. The question put to you by my honourable friend opposite implies that you did not distinctly say to the Committee that it was an oath on the Testament?—No.

4607. This is the part which I wish to be corrected; I am willing to accept your explanation as to the point, but in consequence of the trouble that has been given to the Committee it is right I should ask you, did you not, under the same mistake, say that an oath was administered on this subject?—I did not state that at all, and if you look at the evidence it does not appear.

4608. Will you refer to Question 4500. After I had asked you several questions, the Chairman summed up by asking: "Do you mean they take the oath on the Testament"? and your answer was "Yes"? "Do you mean they take the oath on the Testament?"

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Testament"? I gave my impression as to Trinity College, and that was all. "I believe every reader takes the oath." "You do not speak from authority or from absolute knowledge of the rules and regulations"?—Just so, I did not state anywhere that it was taken on the Testament.

4609-10. Will you refer again to Question 4500; you are asked, "Do you mean they take the oath on the Testament"? and you say, "Yes"?—At the time I did not consider the matter more than that it was my belief; as I myself had taken the oath.

4611. Mr. *George.*] Is it the fact, that your attention was never drawn to any distiction between an oath and a declaration; you were asked, "Do you mean that they take the oath on the Testament"? and you answered "Yes"; I cannot conceive that any question could have been raised on the evidence as to the distinction created by the modern Act of Parliament between an oath and a declaration?—I wish to state what I meant. I naturally referred back to my own experimental knowledge when I graduated, and took an oath. My mind did not follow the change that had taken place, and in stating that an oath was taken, what I wished to convey was, that a solemn declaration was still imposed on the person who read that he should not spoliate or injure a book.

4612. Mr. *Lefroy.*] To shorten this matter, I will ask you, do you withdraw your answer to Question 4500?—Yes; and I correct it: that instead of the oath formerly taken a declaration is substituted.

4613. Sir *Colman O'Loghlen.*] You are aware that, if a statutable declaration be taken by parties, it makes them liable to all the penalties as if they committed perjury, should it be false?—Yes.

4614. Mr. *Dillwyn.*] Do I understand, that from your own knowledge no reader who has the permission of two senior fellows to go to the library to refer to a book can do so without subscribing to a declaration?—No; and my evidence was not that the last day, because I gave an exception, and stated distinctly that a person, a stranger, casually coming in and wishing to consult a book, is permitted to do so by the librarian, if he is present, or by his deputy, his sub-librarian. He was permitted, in his presence, to consult the book for a time. I stated that the oath or declaration substituted, therefore, merely applied to permanent readers; and I detailed the classes who could enjoy the privilege.

4615. I notice that the declaration put in is not like an oath, but it is merely a declaration to take care of the book?—Yes; so I stated. It is a substitute for the oath formerly taken.

4616. Mr. *Lefroy.*] Mr. Waldron asked, "Your impression is, that no person can be admitted to read there until he has taken the library oath"? Your answer was, "My impression is, and I believe it to be the fact, that you could not be permitted to walk in and ask for a book for five minutes, without taking the library oath, or doing this, which I understand was done occasionally. A person would walk in and ask for a book. He would be asked, "Have you taken the library oath"? "No." The library clerk would take him to Dr. Fisher, and he would walk up, and perhaps let him see it for a moment. Of my own knowledge, I do not know that it is done, but I have heard"?—That is what I have said, and the rule bears me out.

4617. Mr. *George.*] Look at the form of declaration for readers; is that the form now used in Trinity College?—I believe it is the form.

4618. Is that not a solemn declaration made in the presence of God, and purporting to be made in pursuance of the statute for substituting declarations for voluntary oaths?—You will understand that I do not state that the statute of the 18 Victoria is the general statute, substituting declarations in lieu of oaths, but I notice that it is the same in spirit. The declaration is, "I, A. B., do solemnly promise, in the presence of God, that whenever I shall enter the library of this college I will handle the books and other furniture of the library in such a manner that they may last as long as possible. I promise, also, that I will not myself carry away any book, willingly injure one, write in one, or in anyway abuse one; nor will I, as far as in me lies, permit others to do so. Moreover, I will communicate to the provost or librarian the names of those who commit such offences within three days after I shall know of them. All and each of which things, and all the statutes of the library, so far as they relate to me, I promise and pledge myself to observe faithfully, stat. 8 Geo. 2, and 18 Vict."

The Rev. J. H. Todd, called in; and Examined.

Rev. *J. H. Todd.*

4619. Mr. *Lefroy.*] You are a Senior Fellow of Trinity College, Dublin, and Chief Librarian?—Yes.

4620. And you are intimately acquainted, I believe, with the rules of the library; will you have the kindness to state what course is necessary for a person to take who wishes to read in the library?—There are some persons who have a statutable right to be admitted to the library; they are graduates of the university, and by courtesy, the graduates of Oxford and Cambridge, and also by a recent regulation students who have completed their first two years in arts; all these persons must make the declaration which you see in this summary of the statutes and regulations of the library; they are then entitled to read in the library. There are others, who have no statutable right, and can only be admitted by the grace of the provost and senior fellows. We can, of course, admit anyone; but the usual practice has been to require a declaration from two of the fellows (not seniors, but any two fellows), stating that they believe the person recommended to be a fit and proper person to obtain the privilege, and he must, when he is admitted, make the same declaration already mentioned.

4621. Is that extended to the reader, if it is only for one occasion that he goes in?—Certainly not; if a stranger goes in, and sends his name to the librarian, or asks permission to see a book, I can allow him to read without making the declaration. I would allow him, if need be to read a whole day. Any master of arts can enable a stranger to consult a book, without requiring from him any declaration.

4622. The declaration made by the graduates or the under graduates is for the protection of the

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the books in case of their being required for a course of reading?—The declaration is simply an obligation to observe the statutes and other regulations of the library.

4623. Mr. *George.*] Will you direct your attention to the form; is it not in the form of the oath for which it is substituted by Act of Parliament?—It is the same which was formerly sworn.

4624. What does it ask the party to do?—"I will handle the books and other furniture of the library in such a manner that they may last as long as possible; I promise also that I will not myself carry away any book, willingly injure one, write in one, or in any way abuse one, nor will I, so far as in me lies, permit others to do so. Moreover, I will communicate to the provost or librarian the names of those who commit such offences, within three days after I shall know of them."

4625. Supposing a party, in violation of the solemn statutory declaration, carried away a book, would he not (you are lawyer enough to tell me that, I think) have committed perjury?—He would virtually; and in the first instance I would exclude him from the library for having violated his obligation.

4626. Then, in fact, the statutory declaration taken by all permanent readers is exactly equivalent to the oath taken upon the testament in former times?—It is the same in words, omitting only the form of an oath.

4627. I presume that the oath was discontinued at the time all voluntary oaths were discontinued under the Act of Parliament?—It was not pursuant to the Act of Parliament, I think, but in pursuance of a recommendation of the late University Commissioners, that the words "So help me God," and swearing on the Gospels, were omitted.

4628. But the declaration does adjure the Almighty?—It is virtually an oath, and with all honourable men ought to be held as binding as an oath.

4629. Mr. *Lefroy.*] I understood that it was the wish of yourself and the Board that the library should be as accessible as possible?—We wish, of course, to make it as accessible and as useful to the public as we can.

4630. Sir *Colman O'Loghlen.*] Sir Robert Peel stated that he went into the library and found no difficulty?—There is no difficulty. Sir Robert Peel, as I understand, did not ask for any book. I do not know what difficulty he could have found.

4631. If a person wanted to read continuously, would he have to subscribe the declaration?—He would if he was admitted by the provost and senior fellows to be a permanent reader, but if he wanted merely to consult a book, he would only have to ask the permission of the librarian.

4632. The graduates of London are not admitted to the same privilege?—They are not excluded by any regulation, and I think they would be admitted, if a case occurred. We have never been asked to admit them.

4633. Sir *Edward Grogan.*] Have you made any refusals of that kind?—Not that I am aware of; we are rather anxious to enlarge than to narrow the number of readers.

Mr. W. Andrews, recalled; and Examined.

Mr. *W. Andrews.*

4634. When you were last under examination I asked, whether Dr. Carte, the curator under you, was hampered by the rules and regulations of the committee, and you stated that he was not, and read a letter on that subject to Dr. Steele?—Yes.

4635. If I collect your evidence rightly, the curator, Dr. Carte, is always entrusted by the committee with a sum of petty cash, for the immediate purchase of objects that he may think desirable?—Yes.

4636. And he exercises the privilege?—Whenever he wishes it.

4637. And he has also the power of making exchanges with other bodies, of specimens, where he thinks the exchange desirable?—He has the power to do so, but he does not desire to exercise it without reference to the committee, except on simple transactions.

4638. He wishes to be guarded by the authority of the committee?—He does; but there is no difficulty in obtaining their sanction.

4639. You have told me that 17 names are selected, and sent up, out of which each committee is to be reduced to 11, have you any observation to make with regard to the number; do you consider 11 a good number, or too large, or too small?—I think that it is too large, and that it would be better if reduced to seven for each committee; I think it would work better.

4640. You speak of the general committee of the society altogether?—Of the general committees of the society altogether.

4641. Is the attendance at the committee good?—Sometimes very good, and generally about five to seven.

4642. What is the quorum?—Five.

4643. Have you ever found it necessary to adjourn the meetings of the committee for want of a sufficient attendance?—Not frequently. The usual general meetings are once a month. Perhaps we have not adjourned on account of the attendance more than once during the session.

4644. What do you think you would gain by reducing the number of the committee from eleven to seven?—In a committee like the natural history committee, for instance, you may not be able to find a number of names of members suitable for such committee.

4645. But you have no doubt that, if the number were under seven, you would be able to obtain that number?—I think so.

4646. And your object would be that a committee (for instance, the one you are immediately connected with) should be composed of gentlemen all of whom are well up, if I may so, in the subject-matter referred to?—That is what the aim of the society has been; to select those most competent from the members for each department or each section of the society.

4647. Have you any observation to make, in addition to your former evidence, respecting the geological collection?—The last day being so hurried, I did not say all that I intended, and I wish to add an observation as to the disposition of the geological specimens of the society. With reference to the Museum of Irish Industry and the geological survey there, Sir Roderick Murchison stated that the geological specimens were

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arranged stratigraphically. In the museum of the Royal Dublin Society the arrangement would be biologically, or with reference to zoological affinities. With regard to the separation of these two I think that the professor of mineralogy will have as much use for reference to one arrangement as the other, and that both should be arranged in the Royal Dublin Society, as both series are required for reference and practical instruction. I do not say that the former museum should be transferred to the Royal Dublin Society, but that the two arrangements should be made; for I think the chief interest of mining connected with Ireland is that the resources of the country should be developed in the most practical manner, and scientific knowledge given to the utmost extent. Without the arrangements of the museum being perfect for reference and instruction, these different branches of sciences cannot be carried out. It was stated by several that the Dublin Society should be considered a popular society, and the Museum of Irish Industry, as teaching the higher branches of science.. Separating the two societies in that manner it renders a society of no utility, because a purely scientific man never can work out practical information correctly without practical knowledge, nor can a practical man with merely practical knowledge define any useful results without the aid of science. That is the great object of the Royal Dublin Society, to work all its views by applying science to industry.

4648. Sir *Edward Grogan.*] By combining science with practice, you do not mean to mix up the two arrangements together?—The two arrangements should be studied in both collections. The collections for the professor of mineralogy (which is one of the professorships of the Royal Dublin Society) must have these arrangements in that manner, that is, he must have the arrangement of the geological specimens with regard to the metals and minerals, and metallic ores; and the same way with regard to the other arrangement stratigraphically, where the order of succession and the super position of rocks have to be studied with their palæontological characteristics. I also wish to add, as chairman of the natural history section of the Royal Dublin Society, an observation with regard to the limited state in the Dublin Society of the fossils collected in Ireland, and the large series in the Museum of Irish Industry. I believe you asked the question whether any application had been made with regard to obtaining these duplicates from the Museum of Irish Industry. They have nearly 12,000 specimens of Irish fossils in the geological portion of the Museum of Irish Industry, although only, I believe, so far arranged as necessary for the geological professor to illustrate his lectures and impart instruction in the study of those formations. But I recollect having seen a note from Dr. Carte, which I suppose I may read. It is a statement of Dr. Carte, the director of the Museum of the Royal Dublin Society.

4649. Stating that application had been made for specimens?—No, stating his views with regard to the specimens. A question arose why the Museum of Irish Industry had not presented to the Royal Dublin Society some specimens of fossils which they had largely in duplicate, and of which they had given duplicates to the Queen's Colleges, and also to the Department at Edinburgh. Dr. Carte writes thus: "As far as I am aware, no application has been made by the Royal Dublin Society for the duplicate fossils collected by the Irish geological survey. I have not recommended that any should be made, as I had no grounds to warrant the anticipation of its favourable reception. Professor Jukes has been lecturing at the Royal Dublin Society regularly for some years on geology, and consequently might be a good judge of our wants, having occasionally used specimens from the collection of the Royal Dublin Society at his lectures, and as a suggestion from him, in his official position in connection with the survey, would have been probably attended to in London, I, in consequence, considered that his omission in this respect to urge the claims of the Royal Dublin Society to a share of the duplicates, indicated his views as regarded the disposal of them."

4650. That is the reason why Dr. Carte did not recommend it?—Yes, or recommend the committee, or suggest to them that an application should be made.

4651. You have heard the evidence given in this room on this subject?—Yes.

4652. Have you any further remark to make with reference to the geological arrangements?—No.

4653. *Chairman.*] Did I gather from what you have stated, that you would wish to have two collections identical in arrangement and identical in purpose in both societies; that is to say, a stratigraphical collection in the Museum of Irish Industry, and another collection, arranged on stratigraphical principles, in the Royal Dublin Society?—The arrangement is different from the geological survey's collection, being biologically arranged in the Royal Dublin Society, as a public reference was one arrangement; but I said that the other arrangement would also be necessary for the professor of mineralogy to refer to for practical instruction and reference for anyone requiring information through his lectures.

4654. Do you require two collections arranged in the manner alluded to, under the same roof?—Yes, to a certain extent.

4655. And, therefore, in the Dublin Society you require two collections of fossils, one biologically and the other stratigraphically arranged?—To a certain extent; but of course the professor of mineralogy would only have them for reference to his mineralogical lectures, *i.e.*, that he has them to refer to with regard to the minerals and metallic ores.

4656. Sir *Edward Grogan.*] Is Dr. Scouler in any way connected with your department?—He is one of the professors of the natural history section.

4657. Was it contemplated, when Dr. Scouler was permitted, under the Minute of 1854, to retire from active duties, that he was superannuated, or was merely leave of absence granted during the time that his infirmity from illness continued?—Dr. Scouler has never been superannuated, and is still considered as connected with the Royal Dublin Society as professor of mineralogy.

4658. He went to Scotland to recover his health?—He went to recover his health.

4659. Can you explain the circumstances which induced the Royal Dublin Society to ask Dr. Schouler to resume his lectures?—It appears by the notes which I have taken from the records of the Society, that in January 1856 Dr. Scouler was attacked by severe illness while delivering a course of lectures on mineralogy. In March he

ws aga in attacked by severe illness, and, from certificates from Dr. Stokes and Dr. Churchill, he was obliged to give up his lectures at that time. The council, on reading the above certificates, resolved that Dr. Scouler be excused from his duties until sufficiently recovered to resume them. In November 1861 a letter was written to Dr. Scouler (who was then in Glasgow), requesting to be informed whether he was able to resume his duties. On the 11th of November, Dr. Scouler replied, that he had made arrangements to return to Dublin, and stated, "On my arrival I will be able to undertake all the duties belonging to the office of professor of mineralogy." Dr. Scouler, in December, returned to Dublin, when, in consequence of his health not being good, another gentleman was obliged to give the lectures for him.

4660. When he returned to Dublin, in 1860, to resume his duties, the society was under the impression that he was perfectly competent to perform them? — Both the society and Dr. Scouler thought he was able to lecture; and it appears that Dr. Churchill, who attended him before, stated that it would be serious to his health to resume his duties.

4661. He never applied directly or indirectly to the society; about the year 1861, when he was asked to resume his duties, stating his utter inability to do so?—No, I do not think that he did; I do not know of any minute of it.

4662. He resumed his labours, and when it was found that he was physically unable to continue them, what steps were taken about a deputy?—I believe Dr. Scouler, at the time that Dr. Churchill gave the certificate, mentioned to the council his inability to continue his lectures.

4663. That was before he came over?—When he was in Dublin, I think.

4664. The council wrote to him to know when he would be able to resume his lectures?—In November 1861.

4665. They wrote to know when he would be able to resume his lectures, and he hoped to be soon able to do so; is that so?—In November 1861, I know that he was asked when he would be able to resume his duties; and he stated he was then able to resume his lectures, and that on his arrival in Dublin he would be able to resume his duties.

4666. He did resume his duties?—I do not think he did.

4667. He came over to Dublin?—Yes.

4668. And he found his health unequal to the duties of lecturer?—He found his health unequal.

4669. What took place upon that occasion with regard to the appointment of a deputy?—The council then, I believe, recommended that Dr. Scouler should appoint a deputy, and allow that deputy one-third of his salary.

4670. They continuing the payment formerly made to him, minus the sum paid to the deputy?—Exactly.

4671. That deputy was Mr. Scott?—Yes.

4672. The present lecturer?—Yes.

4673. Did the Dublin Society name that gentleman?— That gentleman, I believe, was named in the report to Dr. Scouler, and he first objected to the arrangement; but subsequently the Dublin Society considered that the lectures ought to go on, and Dr. Scouler being unable to give them, they told him that unless he consented to such an arrangement they should appoint a person to lecture in his place; Dr. Scouler did assent to the arrangement, and Mr. Scott was nominated by a Committee.

4674. Did Dr. Scouler object to Mr. Scott, or nominate anyone else?—No.

4675. Dr. Scouler objected to his salary being lessened by one-third; was that the point of his objection?—He objected to that in the first place.

4676. Is that the objection which he made?—Well, it was to a certain extent, but I am not sure, because I was not on the committee of the council at the time.

4677. Did his objection extend to the individual selected?—I never heard that it did in any way.

4678. If, therefore, it was stated that it was a cruel act on the part of the society to require that gentleman to come from Scotland to resume his lectures when he was unable to do so, and that another gentleman was nominated in his place whom he did not appoint, is that a correct view of the case?—Dr. Scouler did not say that he considered it cruel. He could not deliver the lectures, and he first objected to the reduction of his salary, but ultimately, when the council found it necessary to appoint a deputy, he assented, without expressing any dissatisfaction with the gentleman appointed to act for him.

4679. Have you, during the time of your connexion with the Royal Dublin Society, had anything to do with the committee under which the library is regulated?—Not immediately with that committee.

4680. Will you give me your opinion with regard to the privilege enjoyed by the society of borrowing books, whether you consider it useful?—I consider it a useful regulation, because there are many who could not attend during the day or in the evening, and that it is a matter of very great usefulness and benefit to them to obtain books from the library.

4681. Do you think that the gentlemen to whom you refer are gentlemen of scientific desires, but engaged in other occupations during the business hours of the day? — Some are scientific gentlemen, and require scientific works, but many are not; and are simply engaged in business during the day.

4682. And are anxious to get the books of the Royal Dublin Society for their use in the evening? — Yes. The library committee of the Royal Dublin Society are very particular in their arrangements about lending books, and they have the privilege of retaining in the society scientific works, if necessary for continued reference at any time, and not allowing them to be lent out, except on particular conditions. I have myself borrowed scientific works from the society; and there is a book kept by the assistants of the librarian, on the library table, in which entries are made of all books lent, the person who borrows them, and the date of borrowing, and so on. If, while I have had any book connected with the society, it was required by any person, I received a note, and I brought it back. This happened to me once with "Richardson's Northern Zoology."

4683. And the book on zoology, to which you referred, was required?—Yes, I received a note, and brought it back.

4684. During the period of the month?—Yes.

4685. Practically, therefore, the book may be considered as equally available for readers who might require to consult it as if it had been in the library?—Yes, except a few hours, or it may be a day's delay.

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4686. Except the delay of sending and getting back the book?—Certainly, that only.

4687. When you speak of that as occurring in your own instance, do you know it to be the general rule in every case?—I do not know if it be the general rule, but I know if a member particularly desires a book which another member has, a note may be written, requesting the book to be returned as early as possible.

4688. The members are entitled to take a book for a month?—For a month.

4689. Have you any reason to doubt that on the receipt of a note of that character, the gentleman who has the book would return it?—I do not know, but I have done it, and if it has been a book of great interest, I have had it again if I required it.

4690. With regard to books of general literature, not scientific, which may be borrowed by the members, do you consider it a useful arrangement that members may have a book at home?—I do.

4691. Will you explain to the Committee the grounds of that opinion?—Simply, as I explained with regard to the members not being able to attend during the day or in the evening, they borrow the books. They have only to keep the books a short time. New books they may keep about three weeks, and other books, I think, they are allowed to keep a month.

4692. No complaint has been raised about damage or loss to the books?—I have never heard of any.

4693. Were you connected with that committee?—Not with that committee, but I never heard of any difficulty with respect to any work of scientific reference being wanted or being absent. I believe that works of extreme interest or value, as works of science, are not allowed to go out.

4694. It has been stated that possibly cases may have occurred, exceptional cases, of parties who asked for a book which did not chance to be in the library, because it was lent out to some members; but during the time you have been connected with the committee, did you ever hear any general complaint of inconvenience?—No.

4695. Do you consider the lending of works of science or general literature, and the facility afforded to families reading the books, conducive to the spread of knowledge?—I decidedly think so; and of great importance to those who desire to study.

4696. Do you think that the abolition of the privilege would be very distasteful to members?—I think so.

4697. Do you think it would be beneficial or injurious to the society to withdraw the privilege?—Injurious to a very great extent, because the members would be highly dissatisfied.

4698. Within your own knowledge, have any gentlemen joined the society in consequence of the facilities afforded by the privilege of borrowing books?—I do not know merely for the privilege of getting books.

4699. *Chairman.*] Would you extend the privilege enjoyed by the Royal Dublin Society of taking out books to other persons?—Do you mean that members should take out books from the society to lend to others?

4700. I mean, would you extend the privilege which members now enjoy of taking out books, to other persons, not members, on their being recommended?—I scarcely could answer that question, whether it would be correct or not for those who are not members of the society to have the privilege of taking books out from the society; but they have ready access to the books on all occasions; at any time persons can refer to the books.

4701. Sir *Edward Grogan.*] If the Royal Dublin Society were enabled to open the reading-room every night in the week, as they now do only three nights in the week, can you point out any further facility which the public might enjoy for reading in the library?—I do not know that they would enjoy any other facility. Even those who are not members of the society can be admitted to the evening meetings. They have every means of access to the books and reading there.

4702. In point of fact, with the exception of three nights in the week, when the room is necessarily closed, can there be any greater facilities given to gentlemen to read in the library?—They can read the whole time that the library is open, every day until five o'clock.

4703. And three days a-week in the evening?—Yes; and, as I said, but for the expense of attendants and lighting, they could have it open every evening. There is no difficulty about the time.

4704. Has it ever came to your knowledge that complaints have been made of the condition of obtaining a recommendation from members of the society for gentlemen to read?—I have never heard of any difficulty whatever. It is perfectly simple, because it is only necessary that any one should be recommended; and there are so many members resident in Dublin that the greatest facility is afforded to strangers on their application to refer to the books or read in the library.

4705. Have you known members of the society ever consider the necessity or the propriety of establishing a school of veterinary surgery in connexion with the Royal Dublin Society?—That has been spoken of in connexion with the Royal Dublin Society. With regard to the professors, I have mentioned the system of instruction, both practical and scientific, in connexion with the society; and I think the appointment of a professor of veterinary surgery would be a most valuable and necessary addition to the society.

4706. From your intercourse with the members of the society, and with the public generally of Dublin and Ireland, is it within your knowledge that such an establishment is looked forward to as a necessary want?—Decidedly. In all parts of the country that I have been in it has been mentioned to me. For instance, in some of the leading provincial towns they have only veterinary operators of a certain kind, and cow-doctors, who go on any system of practice. What is required in Ireland is an establishment in connexion with a society like the Royal Dublin Society, of a veterinary institution, where scientific and practical knowledge can be taught, and knowledge disseminated throughout the country; and if a small hospital, where clinical lectures could be given, could be attached, it would do much good throughout the country; for, I think, no class of practitioners is more needed in the country than scientific and properly-educated veterinary surgeons.

4707. We have it in evidence that the subject has been formerly brought under the notice of the Council of the Royal Dublin Society, but it was not brought into operation; what was the reason

reason it was not carried into effect?—I believe the chief reason, want of funds.

4708. Is there sufficient accommodation on the premises for a good practical school?—Certainly. A stable or building adapted for an hospital to illustrate the subject practically, would be the thing required. It need not be very large, and, I think, that there is sufficient space for that purpose.

4709. That is a want which you have reason to think is sensibly felt?—I think it is sensibly felt throughout the country, for I have been much through Ireland, and particularly the west and south-west; there is scarcely a man who understands the groundwork of veterinary practice so as to explain the diagnosis of disease properly.

4710. Is it within your knowledge that such an establishment is in contemplation with any other society?—I do not know; I never heard of it. The establishment of a veterinary college has been mooted, but it was not carried out.

4711. That was on commercial principles?—That was on commercial principles; but it did not have support, I believe.

4712. Was it the idea of members of the society and generally of all parties, that the society being a well-known and useful body, recommended that society as a proper body to establish such a veterinary institution?—I should think, in connexion with the other branches which the Dublin Society should have under its charge, that this one might be very well associated.

4713. You consider it one of the useful and necessary branches which ought to be in connexion with this society?—I think it should be in connexion with this society.

4714. And it is a want which is strongly felt?—It is not only strongly felt, but absolutely required for the country.

4715. It is a desire very strongly felt?—It is so.

4716. There has been a re-consideration of the finances of the society, and the sums required to put the society in good working order, and keep it up to its requirements; did you attend the council on that occasion?—I did not.

4717. You are aware that an estimate of the sum necessary to keep the society up to the requirements of the day has been put in?—I am aware of that.

4718. Can you have any doubt that the increased sum there asked for is absolutely necessary to put the same in good order?—Certainly; I am perfectly of opinion that it is absolutely required.

4719. Is it your idea that the whole of the expenditure connected with the general work of the society, in its instructional department, should be made by the Government, and that the private funds of the society should be left at their disposal, applicable to the veterinary college, or the agricultural show, for instance?—The view which I would take is, that the private funds of the society, such as subscriptions, which, I think, amount to 1,200*l.* or 1,300*l.* a-year, would be required fully for their public exhibitions and agricultural shows, and for any additional thing of interest which the society might think it necessary to carry out. The public funds, of course, would be appropriated in the way the estimates are made out, and would only be applied in that manner.

4720. The public funds should be applied to what we may call the more public objects, and the expenditure for the other purposes provided by the society?—Yes.

4721. And the State should allocate the manner in which the funds so granted should be expended?—I think so.

4722. Do you know anything about the evening scientific meetings held there?—I have attended many of them.

4723. They are held once a month, I believe?—They are.

4724. You have read papers there, I believe?—Frequently.

4725. Will you describe the process; do you give a notice, or ask permission to read a paper on such and such a subject?—There is a select committee, called the evening sectional meeting committee, and those who wish to read papers or bring forward any matter of general science, make application to the secretaries, and the matter is submitted to the committee of the evening meetings. They are generally gentlemen most competent to decide on the merits of papers submitted.

4726. Are the papers sent in the first instance?—Sometimes, in the case of a member not known to the society, the paper is sent in and examined and reported on whether it possesses sufficient merit, or such as the society can receive; but if any member, who is known to be scientific on any particular branch of science connected with the society, wishes to read a paper, the paper is at once received if there are no other papers appointed for the evening.

4727. The papers read are generally of a scientific and practical character?—Of a scientific and practical character; we have had some valuable papers read there. There is one by Professor Haughton, on "arctic geology," and on the palæontological and other collections, presented by Sir Leopold M'Clintock, and he has also given us some valuable papers on the "tidal currents of the Irish sea"; and other members have given us valuable papers on palæontological, agricultural, and general chemistry; also Dr. Walker on arctic zoology, and Mr. Locke on geographical explorations.

4728. Are these meetings exclusively confined to the members of the Royal Dublin Society?—A member can get as many tickets as he requires for his friends, and bring as many as he wishes. Anyone who wishes to get admission asks for a ticket, and he gets it.

4729. Would anyone get a ticket if he applied to the secretary?—Certainly he would; the secretary would give a ticket to any person desirous of getting any information by attending the evening meetings.

4730. Are means afforded to the public of acquiring a knowledge of the subject on which papers are to be read on particular evenings?—The subjects are given notice of in the newspapers.

4731. And those who take an interest in the question may apply for a ticket, and get it, of course?—Without any difficulty; there is no difficulty in getting admission to the evening meetings, for the members are numerous in Dublin. They are only too glad to accommodate any person desirous of going to the library, to the evening meetings, or any other part.

4732. Are the meetings well attended?—Very well.

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4733. Are the rooms crowded?—They are very frequently crowded to excess.

4734. We will assume the meeting to be held, and the paper to be read; what steps are taken for recording or publishing the papers read in such cases?—The more valuable papers are detailed in the "Transactions" of the society.

4735. They are published by the society?—They are published by the society; and not only that, but the society gives great facilities in publishing to the fullest extent any valuable paper submitted on any subject of practical science, and also goes to the expense of illustrating it.

4736. Whence do the funds for that publication come?—From the funds of the society; the private subscriptions and others.

4737. And private funds of the members?—The private funds of the members; and not alone that, but the writer of a paper is entitled to 25 copies published in a separate form, like this. That is a paper on "Fisheries," which I brought over. This is illustrated, and it is from the large drawing that the Ballast Office explained the plans for building a lighthouse on the Tearaght, on the coast of Kerry.

4738. Do they publish the whole of the papers read on those occasions, or make selections of the most valuable?—They make selections of the most valuable, which are published in full, and abstracts are given of others.

4739. They are printed at the expense of the society, out of the private funds of the members?—Exactly; from the funds contributed by the members.

4740. Is it within your knowledge that these publications are sought for in the country?—Very much, indeed; and not only are they sought for, but many applications have been made to the secretary with regard to these papers, to get copies of them for reference. For instance, last year I gave papers on the "salmon fisheries," and Mr. Wilson, who is High Sheriff of the county of Westmeath, and a large proprietor, has been with me several times, wishing me to undertake in Ireland, in connexion with the Royal Dublin Society, the propagation of the ova of salmon and trout, and he offered to subscribe to get up a society for that object.

4741. You mean to set up store-ponds?—Yes. We have extensive lakes in many parts of Ireland, that are most valuable, because they have neither perch nor pike, those enemies of the the young fish, and these, I may say, now barren lakes, could be well stocked. In the west and south-west of Ireland, the lakes are innumerable, and we have no fine trout in many of them; and there are the tributary rivers, which are not only valuable for salmon, but a better description of trout could be introduced from other localities, and those lakes could be stocked.

4742. Was your proposition, or Mr. Wildon's proposition to you, to establish breeding beds for salmon in any way connected with the lectures delivered at the sientific meetings?—In connexion with the papers given at the meetings of the Royal Dublin Society.

4743. Is it within your knowledge that it grew out of that?—Yes. He went first to Dr. Steele, who referred him to me, and he has been with me several times, and I have stated that I should be most willing to superintend anything of the kind when the season came round. It was only in March last that he spoke to me.

4744. Is that an isolated case, or have others occurred with similar results from these evening lectures?—Yes. I have had a visit from Colonel De Moleyns, who is desirious to carry out in his river near Dingle the artificial propagation of salmon, and also to establish an oyster fishery in Dingle Harbour. He was anxious to know the manner of turning it to the best account.

4745. You have yourself devoted some attention to the subject of fisheries?—I have.

4746. Salmon and inland fishing?—Yes, to both.

4747. Allow me to ask you if there is a zoological society in Dublin?—Yes.

4748. Are you connected with it?—I am a member of it; I was vice-president for two years. According to the rules of the society, a member who has not attended, through illness or other circumstances, the council meetings as frequently as others, goes out, and a member is nominated in place of that one. I am still a member, but not on the council.

4749. Are there any special rules, or will you state any reasons which require the existence of the zoological or kindred societies separate from the Dublin society; do you attach any value to their co-existence, or what are the special advantages derived from the Zoological Society that could not be obtained from the Royal Dublin Society?—That society is a popular society, and is not, I may say, strictly a scientific society, but merely for the public generally, and in fact for creating a taste for popular zoology, and interesting the people by the display of living animals.

4750. They do not follow the subject up in the scientific way they do in the Royal Dublin Society?—No.

4751. The existence of the two societies, the Zoological and the Royal Dublin Society, mutually assist and illustrate each other?—They are perfectly distinct, because the Royal Dublin Society is more an illustration of the objects of natural history preserved in the museum, and the other of living objects.

4752. There are other scientific societies in Dublin, are there not, that are disconnected with the Dublin Society?—There are.

4753. What was the reason of their formation?—The reason of their formation was for the readlng and discussion of papers. The Royal Irish Academy at that time could not receive the several papers of zoological or botanical interest. The meetings being twice a month, and they having so many papers on antiquities, and so many papers on the abstruse sciences, had not the space or opportunity for admitting discussions on zoology generally, and the Royal Dublin Society had then no evening meetings. Therefore, the Geological Society of Dublin was formed in 1831 for the purpose of holding evening scientific meetings, and giving papers on general geology, and on that of Ireland. In 1838 the Natural History Society first held its evening meetings for papers on subjects connected with the natural history of Ireland, and the papers went into minute details of discussion. It was not till 1844 that the Royal Dublin Society had these evening meetings for the reception of scientific papers, although it had popular and scientific lectures of great value. Sir Richard Griffiths' lectures on mining led to great results in the opening of and working of mines, and this dissemination of knowledge by the Royal Dublin Society was of great value. But they had no evening meetings at which the details of anatomy, physiology,

physiology, and botany, connected with the natural sciences, could be discussed. But now the evening sectional meetings being held once a month, papers on general zoology and practical science are often given. Some of the leading men of the scientific institutions in Dublin have given papers there in the evening.

4754. Are the leading members of scientific societies in Dublin generally members of the Royal Dublin Society?—Mostly.

4755. There is no feeling of jealousy and rivalry between the scientific societies and the Dublin Society?—Not the slightest. I am President of the Natural History Society of Dublin, and on the council of others. I frequently give papers in the Royal Dublin Society.

4756. The only object and aim of both societies being the advancement of science?—That being their only object and aim.

4757. And if any rivalry exists, it is to see which can do the most good?—There is no rivalry, but they are disposed to assist each other to the utmost. I can point out on the list of the different committees of the Royal Dublin Society, and especially on the council, the names of the leading men of other societies.

4758. Mr. *George.*] Will you name a few of them?—For the printing and publication, there is Dr. Sidney; there is Mr. C. E. Bagot, superintending the printing and publishing of the proceedings of the Society, and to receive papers and decide upon the question whether papers are of sufficient value to be published in full or merely abstracts given; there is the Rev. Samuel Haughton, and Mr. Locke, a gentleman of high literary attainments, and on the Library Committee; there are several of the fellows of Trinity College; there is the Rev. Benjamin Dickson, fellow of Trinity College; Dr. Sidney; also the Rev. Dr. Urwick; there is Dr. Ingram, also a fellow of Trinity College.

4759. Dr. Urwick is not a fellow?—Dr. Ingram is a fellow, and Dr. Dickson is a fellow; also the Rev. S. Haughton, and Dr. Sidney, and Dr. Anster, are of that class of scientific position connected with the Society.

4760. What circumstances directed your attention to scientific pursuits in the first instance?—My attention was first drawn to those pursuits by attending the Royal Dublin Society.

4761. Your attention was first called to scientific pursuits by that?—I attended the lectures of Dr. Lytton, at the gardens, on botany, and there were two good practical botanists connected with the gardens, Mr. Underwood and Mr. White. Afterward, I attended the lectures of the late Professor Davy, professor of chemistry, who gave lectures on general chemistry in the Royal Dublin Society; I attended his lectures three years. These gave me so great a taste for the study of Natural History, that in order to carry it out I matriculated in Trinity College, Dublin, as medical student, and obtained the necessary certificates for anatomy and physiology, chemistry and botany, and attended demonstrations and dissections in Trinity College under the late Dr. Harrison. I found how necessary it was to have a good scientific groundwork of knowledge to work out any subject practically that I took up; but it is through the Royal Dublin Society that my tastes were first formed.

4762. It has been said that the general operations of the Royal Dublin Society were practical rather than scientific; and that the gentlemen comprising the various committees were not of a scientific education, sufficient to conduct the proceedings of a scientific body?—I have mentioned that these men, selected from the society, are selected as being the best members for carrying out the committees for the well-being and utility of the society; and those members I may say are members also of other leading scientific societies in Dublin.

4763. As regards the professors of the Royal Dublin Society, some of the most eminent gentlemen in the scientific world have held the appointments, have they not?—The council and members of the Royal Dublin Society are most anxious to select the most competent professors in Ireland. For instance, there is Dr. Harvey, who is well known as one of the first botanists of the day. We have several others, Dr. Carte, an admirable comparative anatomist, and the other professors are all chosen in the same way from the men best qualified to carry out the scientific and practical objects of the society.

4764. The professors have been hitherto elected by the body at large, have they not?—By the body at large, but the names are selected in the first instance by the committee; they select the best men.

4765. The committee recommend the men best qualified for the society at large?—Yes; and the society at large rarely dissent.

4766. Has any instance ever occurred, in which the most competent man, recommended in the way you speak of, has been set aside to make way for another, for personal or other reasons?—I do not know; I do not know of any.

4767. Do you consider the scientific education given under the Royal Dublin Society, has materially tended to the advancement of science in the country?—I think so, to a considerable extent.

4768. As far as their means went?—As far as their means went. I should mention, as you have alluded to the state of the society at present, its museums are in such a state that it cannot go to the extent to which it usefully might.

4769. But when it is in full effective and working order, have you any doubt that it will be perfectly competent for the scientific education of the people of the country?—I think with the systematic arrangement proposed, the professors now connected with the society in the different departments, and the lectures and other means of disseminating useful knowledge, when all arrangements are completed, ought to be perfectly good. It will give information, both practical and scientific combined.

4770. Has it come within your knowledge that professors of high branches of science have objected to the arrangements by which they were placed under the control of the committee?—The professors are not under the control of the committee; they are merely connected with the different sections, but they are not under the control of the committee.

4771. You have never heard a professor object to such an arrangement?—I never heard it complained of by any professor that I have been connected with.

4772. Can it have occurred in the Society without its having reached you that such a complaint had been made?—I never heard it complained of in the Society; as I have mentioned to you, the committee do not interfere. The professor of mineralogy, who is connected with the committee of natural history, prepares his

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syllabus; there is no interference on the part of the committee; this is a practical and scientific course of mineralogy as applied to minerals and everything connected with metals; that course is given; the committee do not interfere in any way.

4773. Have you heard any complaint on part of the public or those attending the lectures in the theatre, of the disadvantages they suffer owing to the first two or three benches nearest the lecturer being appropriated to the use of members and their families?—I do not know anything of the kind; I have seldom attended the lectures lately, and do not know how they are attended, but I believe the members have the privilege (I do not know about their families) of going to any part of the theatre.

4774. Have you heard any complaints on the subject?—No; I have not heard any.

4775. I believe you have delivered a lecture lately on the subject of Irish fisheries?—I gave one lately on that subject.

4776. In it did you refer to the bad mode of propagation or the actual state of the sea fisheries?—The actual state of the sea fisheries of Ireland, and the system of trawling, and the effect of trawling on the fisheries, and the position of the coast fisheries generally.

4777. Did any results in the way of increasing or encouraging the sea-fisheries of the country arise from the lectures?—That paper was only lately given; but from previous papers favourable results have taken place. I may say I have been instrumental in advancing the fisheries, and establishing a number of boats. It first originated with the views put forward with regard to the fisheries of Ireland. Subsequently, the means were found through another society, of which I am a trustee. It is, perhaps, not generally known to the Honourable Members that there is a society for bettering the condition of the poor of Ireland. The funds are directed altogether to the coast fisheries, and the encouragement of spinning and making of hemp for lines, and for making coarse clothing for the peasantry. They have had about 30,000 *l.* at their disposal, and the manner in which it has been distributed has been useful to the country. On the recommendation of two approved securities, any man wishing to provide a larger boat or better means of fishing, if he wants 200 *l.* or 300 *l.* or 400 *l.*, on applying to the society, with the approved securities, the society will lend the money, free of interest, to be repaid by easy instalments, over a number of years, no instalment being payable for the first twelve months. Many loans have been turned to great advantage; and we find the fishermen better and more industrious after getting loans of money, which they have to repay, than if they got gratuitous assistance.

4778. And is the practical operation of what you describe as going on connected with the scientific exposition given in the evening lectures?—Altogether connected. For instance, a gentleman in the south-west of Ireland, early this year, went security for his tenantry, seeing what might be turned to account by the proper working of the fisheries; many fishermen and their families have thus got loans.

4779. Have you any reason to think that his attention was drawn to that by the papers given?—Through the papers given he applied through a clergyman in the south of Ireland.

4780. In point of fact, by means of these scientific lectures you have described, the attention of gentlemen in the country has been called to the means of improving the position of the poorer class engaged in fishing, and great practical results have ensued?—Decidedly. The society just alluded to has been in practice for many years, but I believe few applications were made for loans, because the loans were only given for the coast fisheries. I have here the forms which have to be filled up; one is for spinning and flax, the other is for coast fisheries. Since these papers on the fisheries have made them better known in the country and the fishing grounds on the coast, more applications for loans have been sent in than for many years past. There is scarcely a Board meeting at which applications are not made for money for the fisheries. In 1862 there were only three large boats employed in the herring fishery, by Howth men, and by means of the society large boats were provided. In 1863 there were 26, and they are since increasing.

4781. You mentioned the subject as an exemplification of the practical utility of the scientific lectures?—Decidedly.

4782. Where are the offices of the Society for Bettering the Condition of the Poor of Ireland?—32, Lower Abbey-street.

4783. Who are the secretaries?—Sir John Kingston James, Bart. and Mr. George Kinahan are the treasurers, and there is an assistant secretary.

4784. What office do you hold?—I am one of the trustees. There are a certain number of trustees; Lord Talbot de Malahide, Sir Edward Borough, Bart., and others of well-known position. I generally attend the meetings, and frequently through my recommendations money is advanced.

4785. The fund is 30,000 *l.*, and the interest applicable to that?—The fund accumulated for many years. The manner in which the fund was formed was this: there was a balance remaining out of the money subscribed in 1822 for the famine; after all the monies had been applied to the extent required, this balance remained, and there was also a balance from the London Relief Committee. They said the most useful way of applying the surplus would be on the coast of Ireland. The London Relief Committee gave over a sum of money, and the balance in the hand of the committee of management in time accumulated to 30,000 *l.*; about 15,000 *l.* is invested in Government stock, and the interest at present can only be applied to the fisheries; the remaining balance can be fully applied to the purposes I have mentioned.

4786. Do the applications made to you as trustee of the fund exhaust the interest of the fund yearly?—No; there are constantly sums going out, from 10 *l.* to 500 *l.*, and there are instalments coming in.

4787. Did you ever take any pains to advertise or give public notice of so useful a fund?—Only in the Directory. It is necessary that public notice should be made, because many in Ireland know nothing of it; most of the trustees connected with it not understanding the fisheries, the Society was in a great measure in abeyance. Latterly it has done much good; and the papers on the fisheries having brought to notice the existence of such a society, many applications for loans from this fund have been made.

4788. Mr. *Waldron.*] I believe that we are indebted to you for the clearing up of much that was hitherto obscure in the natural history of the salmon?

salmon?—I have written several papers, pointing out the true habits of the salmon.

4789. Some years ago, I believe you read papers on that subject?—I did, very fully.

4790. And that directed attention to the subject?—It did.

4791. And between the discussions that arose on your papers, and the communications which you received from gentlemen, I think, in Scotland and the North of England, and comparing their observations with your own, many things that were unknown or misunderstood were cleared up?—I received several communications from the manager of the Duke of Sutherland's salmon fisheries, who corroborated all the views I put forward, and expressed great pleasure in receiving the information, and afterwards I sent him several papers from time to time, and he expressed his gratification, and admitted the correctness of all my views.

4792. Have you reason to believe that your having directed attention to the subject has been the means of causing more care and attention to be bestowed on the salmon fisheries?—I have not heard with regard to the salmon fisheries, although my views are known and admitted.

4793. You have read papers on deep-sea fisheries, I believe?—Yes.

4794. You have referred to that in your answers?—Yes.

4795. You have read papers on this subject also some years ago?—Yes, three or four years ago.

4796. And they too have also provoked discussion?—They have led to much discussion and attention.

4797. Have you any reason to believe that any useful results, other than those alluded to, have grown out of your papers?—In several parts of the coast of Ireland, so great has been the improvement amongst the fishermen, that they have now large boats; they are enabled to work the deep-sea fishing, and they are getting on so successfully about the south-west coast that they are anxious to get larger boats to follow the deep-sea fishery. In reference to the paper read before the Royal Dublin Society, lately published in the newspapers, I received a memorial and thanks from the fishermen of the south-west coast with regard to the paper, which shows that it was considered by them of much use.

4798. You are aware that some time ago there was a curing establishment near Dungarvan?—I believe so.

4799. That was one of the results, was it not, of your papers?—I am not aware of it. I never heard so. But there was an establishment formed at Dingle, and, for the time it did exist, the fish cured were considered by one of the most eminent firms in Dublin, superior to the fish imported from Scotland. There are statements from that firm in Dublin to that effect, both as to quality and size.

4800. Have the fisheries at Howth increased greatly of late?—They have increased; there are 30 boats worked by the Howth fishermen.

4801. Where formerly the fisheries were worked by Cornishmen?—By Scotchmen and Cornishmen, and only a few small boats from the coast there worked about Balbriggan and Howth.

4802. Have you reason to believe that from papers read at the evening meetings of the Royal Dublin Society, attention has been directed to these subjects, so that matters are now as they are?—I am certain that the papers read, and the discussions on those papers, have led to a great deal of improvement in the fisheries.

4803. You have been chairman of the Natural History Committee of the Royal Dublin Society, and I believe you have been a regular attendant at its meetings; will you be good enough just to read the answer to Question 3867, which was put to Dr. Percival Wright?—I believe that I have already given an answer to that.

4804. In the letter of Dr. Carte, which you read?—In the letter of Dr. Carte.

4805. But I wish to have your own opinion. Is that a candid statement of the case?—I should say not, because the director of the museum is not in any way fettered in making exchanges that would be useful to the society, or that might be advantageous to other societies.

4806. Am I right in saying that he looks upon the Natural History Committee rather as aids than obstructions to him?—He looks at the Natural History Committee as a protection to him in all his acts, for he has frequently, as I stated before I read the letter of Dr. Carte, mentioned to me that he did not wish to have the responsibility with regard to exchanges or purchases, although he had perfect liberty to do so. But there is no difficulty in the way of it, as the committee could be summoned in a short time.

4807. Then, the non-exchange of specimens, which Dr. Percival Wright attributed to the constitution of the committee and its relation with the curator of the museum, is not correct?—I have been chairman twice of the Natural History Committee, and have been a member of the Natural History Committee for many years, and I never heard of any application of the kind, or of any difficulty in the way of exchange.

4808. You never heard Dr. Carte complain of the interference of the committee?—Never; and I think his letter fully bears me out.

4809. Your experience corroborates fully what he states in that letter?—Certainly.

4810. And that is entirely inconsistent with the statement of Dr. Wright?—I do think it is entirely inconsistent.

4811. *Chairman.*] If the director of the Natural History Museum were offered any specimen in exchange for one of his own duplicates, could he act upon his own authority at all, without reference to the committee?—It depends entirely on the value of the specimens. If he considered that the specimens were too valuable to exchange without reference, he would not undertake it; but there would be no difficulty with regard to his doing so on reference to the committee. It is only that he would not wish to undertake the responsibility. He can do this, because, of course, Dr. Carte would have that interest in the society that would only allow him to exchange specimens that would be of utility to the society, for specimens it would be of utility to get. There is no difficulty in his acting as he may consider to be to the advantage of the society, or of other societies who may wish to exchange.

4812. Is there not a possibility of his losing the chance of an exchange, in case he should have to refer the matter to the committee?—Do you mean a difficulty about referring to the committee?

4813. The committee may not probably sit for a considerable time after the proposal was made?—There is no difficulty in that whatever. If any matter is pressing, or it is desirable to have early intimation, any one applying for exchanges

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can get a committee called together. A committee can be got in a short time on application, either through the secretaries, a vice-president, or by three members of the committee signing the application, when the summonses would be at once issued.

4814. Circumstances such as these might arise; that the curator might be nervous, perhaps, at exchanging a specimen without the authority of the committee. That might arise, might it not. The curator might consider himself puzzled whether he should act on his own judgment, or whether it would be necessary to call a meeting of the committee?—If the director did not like to act on his own judgment, he would refer to the committee. But even under these circumstances, there is no delay in arranging the exchange if it be thought advisable.

4815-16. Would there be any objection to an arrangement of this kind: the curator to send in a report to the committtee of all specimens he had in duplicate, and which he wished to exchange, that the committee should examine and report on them, and then he should have perfect liberty to exchange any of them on any exchange being proposed to him?—I believe that the director is aware of the extent of duplicates in the society available now. Many have been packed up, and are not for exhibition. He is aware, and the committee are aware, what may be made available for exchange; and I do not think that there is any difficulty on the part of the director.

4817. Do you think there would be any objection to such an arrangement as I have proposed?—There can be no possible objection whatever; the committee will, perhaps, submit the matter to the council, and they will decide.

4818. It would enable the curator to act at once, without a moment's delay?—I should say so, if the director would wish to take such responsibility on himself.

4819. Mr. *Waldron.*] In the letter of Dr. Carte, which has been handed in, do you see this sentence: "Whenever necessary, I can have a special meeting of the committee within two or three days at any time"?—That I have mentioned.

4820. *Chairman.*] You stated that a museum without professors to explain the meaning of it would be useless. Did you intend that to apply to all museums, or only to this particular museum?—What I intended to convey was, that a museum, when perfectly arranged for public instruction, would be comparatively useless without the attendance of the director and the professors in the several branches of natural science.

4821. Cannot you contemplate the utility of a great museum of reference apart from a museum which is to be what I may call an educational museum?—I do not see what use a great museum of solely reference would be in Dublin. The object of the Dublin Society is to give information to the fullest extent, and to carry out scientific and practical instruction throughout the country. A great museum of reference would only be useful to people in Dublin.

4822. Would not persons come up from the country who were anxious to consult it?—They have always the opportunity of consulting it; the objects themselves cannot convey, to the extent necessary, useful instruction.

4823. Would you confine your remark, that professors are useless without a museum, so as to refer only to the museum of the Royal Dublin Society?—I mean, that a museum, when systematically arranged, should have the means of explaining the objects, and of making them of utility to the public generally, and should have a director to do so; and that lectures by the professors on the several branches of natural science would be necessary to illustrate the museum and to disseminate useful knowledge throughout the country, but not merely a museum of reference to look at the objects.

4824. In the capital of the country, such as Dublin, do you not think that a museum of reference alone would be of considerable importance?—Certainly; a museum systematically arranged, I have said, as a museum of reference, would be useful, and it would be also a museum available to the professors for practical and scientific instruction.

4825. You consider it to be useless without those professors?—I consider that it would be comparatively useless without those professors; because there is only one museum in the country. The collections of the Royal Dublin Society are very extensive in the different branches of natural science, and in zoology particularly, but in the museum of Irish Industry they are small. There is, therefore, no museum of reference in the museum of Irish Industry, for it only contains the collection of the original Ordnance Survey made under General Portlock.

4826. Then, you remark, "that a museum without professors to explain its meaning is useless" is not a general remark, but only referred to the Royal Dublin Society?—I mean that that museum, arranged as a museum in the way in which it is proposed to be arranged by the Royal Dublin Society, would not be of perfect utility to the public without the lectures of the different professors on the different branches of science.

4287. Are you of opinion that a small typical museum would not be sufficient for giving lectures, for what I may call educational purposes?—But a museum arranged like the Royal Dublin Society would answer both purposes.

4828. You say that this museum, without professors to explain its meaning, would be useless; is that so?—Yes; to disseminate knowledge properly.

4829. I think you stated you were of opinion that the Zoological Society should not be amalgamated with the Royal Dublin Society, inasmuch as the Zoological Society was popular in its character, whereas the Royal Dublin Society was a scientific institution?—No, not amalgamated. The latter should be considered as a scientific body, for scientific and practical instruction combined; the other is a popular society.

4830. Have you ever read the Minutes of Evidence taken before the Select Committee on the Royal Dublin Society in 1836?—I do not think I have seen them.

4831. Are you aware that Dr. Hardy, a gentleman who took a great interest in the society, and a high authority, stated that the members of the Royal Dublin Society never considered it to be, and that it never was, a scientific institution?—It may not perhaps have given scientific papers; but the lectures given at that time in the Royal Dublin Society were very useful to the country. There were lectures in 1836 on general chemistry, which were scientific; also lectures on mining and other branches; the lectures were both scientific and popular, although it was perhaps not considered as a scientific society or body at that time.

time. They had no museum, and only a limited collection of fossils and minerals were exhibited. They had a kind of public museum for the public to amuse themselves with, but now it is in a different state. They have scientific men associated with them, and scientific sectional meetings. They are arranging the museum, as far as their means admit, in a scientific manner. It is admitted to be of general usefulness, both practical and scientific.

4832. You think it has assumed a more scientific character since 1836 than might have been stated of it at that period?—Certainly, these papers have done an immensity of good in the country. You may be aware that the Royal Dublin Society first instituted inquiries through Ireland as far back as 1808, into the state of the west coast and south of Ireland, and, with the exception of a few books of an inferior kind, few gentlemen farmers had a library. They sent Mr. Dutton, an English agriculturist through Clare to examine the country there, and he pronounced that part to be in a melancholy state, in fact semi-barbarous. Then, by the exertions of the Royal Dublin Society, Sir Richard Griffith's lectures on mining were given, and other useful lectures on agriculture and chemistry; the country became gradually improved; and now it has arrived at such a state of advancement that everything carried on in the country must be carried on in a purely scientific manner, and not in a popular way. The present state of literature, science, education, and information, is such that the Society must keep pace with it.

4833. You are of opinion that everything must be carried on scientifically, and not popularly?—Certainly.

4834. Or else the Society is not of the least use in the world?—It would not be of the least use in the present state of advanced knowledge.

4835. Have you given much attention to the proposal for establishing a veterinary school?—I have taken a great interest for some time in the subject; I have many connexions throughout Ireland, that I have seen more than ever the great necessity of it.

4836. And you attach the greatest importance to it?—The very greatest; and I think it is an absolute requirement in the country.

4837. And you think it is peculiarly fitted to the Royal Dublin Society?—I think that in the Royal Dublin Society, with the position it can assume and will assume, it would be proper to establish a veterinary institution and hospital, however limited, for clinical instruction and teaching the diagnosis of disease in animals, and that those taught there being distributed throughout the country will remove much evil resulting from that want of knowledge.

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4838. And you think that throughout all Ireland there is a strong feeling in favour of something of the kind?—In all parts I have been through the system is much required.

4839. It has been stated in evidence before this Committee that 700*l.* would be required for the buildings necessary for such a college?—I have never seen the estimate, but I do not think it would be a very high estimate; of course a man properly educated must be appointed professor.

4840. For a building of that description, would you not think it necessary to apply for aid to the Government, inasmuch as it is a matter of such national importance?—I think it is of such great importance, and in the position in which you are aware the Royal Dublin Society is placed with regard to funds, that it would be of vast importance to the Government to establish a school of that kind.

4841. With regard to the expense of the instructional department of such a veterinary school, it has been stated by one of the witnesses that an annual increase of from 180*l.* to 200*l.* would be required?—I do not think it would be great, because, if it was in connexion with the Royal Dublin Society no doubt the society would assist the matter much, especially having these extensive agricultural exhibitions, which are improving every year. We have had recently a kind of introductory horse show, which was well attended. We had the gentry from all parts. If there were a school of veterinary surgery and an hospital, they would inquire into and learn the different features that disease assumed in cattle. Epidemics occur in different ways in different years and seasons. All this may be attended to, and save the country a great deal of loss by having information of that kind disseminated through Ireland by sound practical scientific teaching.

4842. If the society received some assistance from the Government for the structural arrangements of such a school of veterinary instruction, the society would be enabled, either by a different allocation of its private funds, or by increased funds likely to come in from its exhibitions, to provide for the annual expenses of such a school?—I daresay the society would at any time be able greatly to assist such a movement. I cannot say it could do so at the starting unless Government aid were given to form such an establishment; but in time, I daresay, the society could very materially assist in carrying out such a system. It has better means, perhaps, at its disposal than any other.

The Very Reverend Dr. CHARLES GRAVES, called in; and Examined.

4843. *Chairman.*] I THINK you are the Dean of the Chapel Royal, President of the Royal Irish Academy, and Senior Fellow of Trinity College?—I am.

4844. And you were Professor of Mathematics in Trinity College?—I was Erasmus Smith's Professor of Mathematics.

4845. Of course, as President of the Royal Irish Academy, you can give this Committee a perfect knowledge of its origin, its functions, its objects, and its constitution?—I have been an active member of the Academy since the year 1837. I have held office as member of the council, secretary of the council, secretary of the Academy, vice-president; I am now president, and have had considerable experience of its affairs. I will, to the best of my ability, give the Committee an account of the matters to which you have referred.

Rev. Dr. *C. Graves.*

4846. When was the Royal Irish Academy incorporated?—It was incorporated by Royal Charter in January 1786, for the promotion of

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science, polite literature, and antiquities. A Royal Letter under the privy seal was issued in the previous year, but the charter dates from 1786.

4847. I believe it has been actively employed ever since its origin in the publication of scientific transactions?—Its meetings are held during eight months of the year, generally twice in each month, and the most important papers read at those meetings appear afterwards in the "Transactions" of the society. Twenty-four volumes have been published, and these, I believe, are thought highly of in other countries as well as Ireland.

4848. The Royal Irish Academy stands to Ireland in the same position as the Royal Society, the Royal Society of Literature, and the Royal Antiquarian Society in this metropolis do to England?—It does. The objects of the Royal Academy of Ireland are threefold, in accordance with the charter. We have three committees, who superintend the different departments; and though these departments are so different from one another, yet there has been, on the whole, a great deal of active and useful co-operation amongst the members of this Society. The transactions published refer to all these different departments of our work; but the two in which the greatest amount of activity is manifest, are the departments of science and antiquities. Polite literature at present is in a certain sense little attended to in the Academy; but that I would explain by reference to the circumstances of the time. General literature does not now need the fostering care of an Academy.

4849. General literature being as it were out of leading strings, you confine yourself to those topics which you consider most within the terms of the intentions of the original founders of the Society?—Investigations in matters of abstract mathematics and science generally appeal to a small and highly-educated public, and those who are engaged in researches of that kind are often persons who could not afford to publish their discoveries, if they had not the assistance of an Academy like our own.

4850. Will you inform the Committee what assistance you obtain from Government: first of all, with regard to the house?—The Academy is furnished with the use of a very good house by the Government, and the house is kept in repair by the Commissioners of Public Works. We have in it a fine library, in which the meetings of the Academy take place; we have a museum, in which our collection of Celtic antiquities is exhibited; we have a council-room and other rooms, devoted partly to the accommodation of the officers, and partly to other objects. It is a very suitable location for a dignified and useful institution; it is well situate, and in every respect commodious. It is possible that as our collection of antiquities and our library increases, we may hereafter need further accommodation; but at present the house appears likely for a long time to supply whatever accommodation we need.

4851. I think that the former house was in Grafton-street, and was called the Navigation House?—It belonged to the Mornington family.

4852. Will you inform the Committee as to the constitution of the Academy?—The Academy consists of a president and council of 21 persons, and an indefinite number of ordinary members. There are also, in the various departments of science and literature, honorary members who are for the most part foreigners. The council of 21 is divided into three committees, each of seven, for science, polite literature, and antiquities. The council at large is elected on the 16th of March every year, in accordance with the charter; but it does not really happen that a wholly new council is elected every year. There is no very great fluctuation in the council, though arrangements have been made to secure a certain amount of rotation in the committees. The president and the council are the executive; they have the privilege of initiating all business relating to finance and bye-laws, and if they see occasion to make any change or to have any new measure carried, they submit a recommendation to the body of the Academy, which, by a vote, sanctions or refuses to adopt the recommendation.

4853. The decision of the council is not final?—The decision of the council is not final; but as it has the initiative, it enjoys very great power.

4854. How many members have you in the Academy at the present time?—The total number of members at present is 355, of whom 197 are life members, and 158 annual members.

4855. What is the ordinary payment to constitute a life member of the Society, and what is the payment for an annual member?—An annual member pays a subscription of two guineas.

4856. What is the entrance fee?—The entrance fee is five guineas; the life composition is 20 guineas. A member who has paid the annual subscription for 20 years, may, by an additional payment of six guineas, compound for the rest of his life.

4857. In what way are members elected; by ballot?—By ballot; there must be a quorum of 16 present, in order that a ballot may take place, but generally we have a larger number; that is the minimum fixed by the charter; and of the members who are balloting for the admission of members, at least three-fourths must vote for any candidate.

4858. Mr. *O'Reilly.*] Is it a strict ballot?—It is a strict ballot.

4859. *Chairman.*] Is there any standard of literary or scientific qualifications positively set up for admission?—There is no absolute standard, but it is generally understood that the parties seeking admission into the Royal Irish Academy are persons of more than ordinary acquirements; that they are persons of scientific and literary tastes and aptitude; and as the papers read in the Academy are not of a popular nature, it is only persons of some superior degree of acquirement who think it worth while to become members of the Academy; in fact, being a member of the Academy is regarded as a kind of literary or scientific degree, and persons sometimes seek admission in order to be able to write "M.R.I.A." as a title after their names.

4860. Are any of these candidates for this honourable distinction often refused by the process of black-beaning?—I am not able to give any exact return on the matter. It is not usual to have recourse to black-beaning. I made inquiries and ascertained that since January 1858 there had been but five candidates black-beaned, but none at all have been black-beaned since I held office as president; I have never, when acting as a scrutineer, seen a candidate black-beaned.

4861. Has the admission into the Royal Irish Academy been limited by considerations of politics or religion?—I think I may confidently say No; we have, in the list of members, persons holding various

various shades of politics, and I can certainly declare that politics have not been introduced in any way into the proceedings of the Royal Irish Academy, and as they are not introduced into the proceedings, we have no difficulty in asking persons of different views to join us. I may say also, with respect to religion, that it has not been a ground of exclusion. I went over the list of members the other day, and reckoned up at once the names of 36 gentlemen whom I knew to be Roman Catholics, and there might be more.

4862. Sir *Colman O'Loghlen.*] There is nothing sectarian?—There is nothing sectarian. On our council, which as I have mentioned consists of 21 persons, there are four Roman Catholics; and, on the list which, in compliance with the charter, we prepared previous to the last election, on the 16th of March, there were, in a list of 43 persons, out of whom the president and 21 members of council were to be elected, eight Roman Catholics. Four of these were elected, and four stand on the eligible list.

4863. Are there several Roman Catholic clergymen members?—There are some, I believe; for instance, the Rev. Mr. Meehan and the President of Maynooth. I know the Academy is not sectarian.

4864. *Chairman.*] You have never heard any complaint, have you, of any kind against the Royal Irish Academy on the ground of religious differences?—I have not. I wish to add that it occurs to me that Mr. William Smith O'Brien (just deceased) was a member of the Royal Irish Academy, and he was elected some time ago, when it was more likely that objections would have been raised; but he was elected without its giving rise to angry feelings.

4865. Sir *Colman O'Loghlen.*] I believe Mr. Smith O'Brien lost the strict right of being a member by his absence from the country, and he was afterwards allowed in by a special vote?—By a special vote of the council.

4866. *Chairman.*] The President and Council of the Academy constitute the executive body, I think?—Yes.

4867. It takes the initiative in all matters of business?—Yes.

4868. And the president and council are elected annually?—They are.

4869. The government of the Royal Irish Academy is practically oligarchical?—That does describe its government. When once a person is appointed a member of the council, unless he forfeits the place by insufficient attendance, he is likely to remain on it for a considerable time. There is a rule which requires members of the council to attend ten meetings in each session; and if, from insufficient attendance, or death, or from resignation, a vacancy occurs, it is filled the following 16th of March, if not earlier; and if a vacancy does not arise in either of the ways I have mentioned, then a provision, to which I just now referred, has been made for securing a certain amount of rotation yearly; the senior member of the committee going out; but that is only in accordance with a recommendation made and sanctioned by the Academy. The charter would be infringed if we made a bye-law to that effect, for the charter requires that a list of 43, out of whom the president and council are to be elected, including the names of the previous committee, should be prepared. Therefore, it is in the power of the Academy to continue to re-elect the members of council as long as they please.

4870. The president, although elected annually, usually holds office five years?—That, again, is by an understanding. The Academy would be free to elect the president continually, but it was thought expedient that an office which was coveted, and to which a certain dignity attached, should be more frequently at the disposal of the Academy; and a recommendation was agreed to, that the tenure of the presidential office might be limited to five years.

4871. You have stated that the Government provides the structure in which the Academy is situated?—Yes. It supplies us with a good house, and keeps it in repair.

4872. What is the annual grant which the Government gives to your Society?—The annual grant at present is 500 *l.* a-year; up to 1855 I think it was 300 *l.* a-year, but it was raised to 500 *l.*

4873. I think in 1800, before the Union Parliament gave the Society a grant of 1,000 *l.*, and then settled 50 *l.* per annum?—It did.

4874. In 1816 the Academy received 300 *l.* per annum?—I think it, for a time, received 350 *l.* a-year, Irish currency.

4875. And in 1855 the grant was increased to 500 *l.*, at which it at present stands?—Yes.

4876. And you have had small special grants from time to time for various purposes?—The Government has granted sums in aid of subscriptions amongst the members.

4877. Will you give the Committee an average of the income of the Society, as derived both from the Government grant and various other sources, for any period you may think fit?—I have prepared a statement of the average income of the Academy for the last ten years. The Parliamentary Grant is 500 *l.*; interest upon a legacy for scientific and literary objects, called the Cunningham Fund, 51 *l.* 19 *s.* 6 *d.*; interest on Academy Stock, 16 *l.* 17 *s.* 8 *d.*; sales of publications, 13 *l.* 12 *s.* 8 *d.*; life compositions, 116 *l.* 11 *s.*; entrance fees, 73 *l.* 10 *s.*; annual subscriptions, 279 *l.* 6*s.* Then there are certain contingencies, 2 *l.* 2 *s.*, making a gross total average annual receipts for the last ten years of 1,053 *l.* 18 *s.* 10 *d.*

4878. What is the Cunningham Fund to which you have alluded?—It was a legacy bequeathed to the Academy for the promotion of scientific and literary purposes, and it is generally devoted to the awarding of medals to the authors of papers and essays. The regulations with respect to the award of those medals have varied from time to time.

4879. What is the amount of the Cunningham Fund?—About 1,000 *l.*

4880. What is the meaning of Academy Stock?—The item of Academy Stock enters into the account in this way. Many of the members have paid life compositions. These compositions were not all funded as they should have been. There ought to have been a life composition fund of above 3,000 *l.*; to use the life compositions as part of the annual income was improper. We were driven to it in consequence of the great deficiency in our means, but we have to represent that sum of above 3,000 *l.*, at present in Academy Stock, something above 1,000 *l.*, and that is the Academy Stock to which your question refers.

4881. Are you annually laying by a certain sum of money to replace the amount spent?—From time to time our treasurer has been invest-

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ing small sums. I think the average investment for the last 10 years was about 110*l.* He has purchased stock with a view to replace that life composition fund which ought to be in existence.

4882. Did you trench on the Cunningham Fund in any way?—I am sorry to say we did, and some small purchases of stock have been made to bring it up to its proper amount.

4883. Is it now restored to its original amount?—I think it is pretty nearly what it ought to be. It ought, however, to be larger than the original amount, because whenever the medals were not awarded, and the interest not expended in supplying medals, or otherwise applied according to the terms of the bequest, the interest should have been funded along with the principal, and added to it.

4884. Do you not think that it is highly requisite and right that that fund should be brought up to what it ought to be?—I think it was an impropriety in the first instance; an irregularity I should rather say, to encroach upon it, and we are now called upon to bring it up to its full amount. Some difficulty arose about this matter in passing our accounts with the Treasury, and a long and rather delicate correspondence took place. The Treasury thought we were doing what was irregular in investing any part of the Academy funds. We were receiving a Parliamentary grant, and it was a question whether it was a regular thing for us to save any money out of our income; but when this matter was fully stated before the Lords of the Treasury, they acquiesced in our doing what I have explained.

4885. When did this encroachment upon the two funds, the Cunningham Fund and the Academy Stock, take place?—It went on from year to year; our expenditure sometimes considerably exceeded our income, when our grant from the Government was only 300*l.* a-year, and the Society was in a great state of activity, publishing long and costly mathematical papers; we found it impossible to avoid exceeding our income, and we then encroached upon these funds.

4886. Did these tranactions take place prior to 1852?—They did.

4887. Mr. *Lefroy.*] Then you are not in debt; your expenditure has not exceeded your income, except in these cases?—Our income and expenditure are now balanced; we have an exact and intelligent treasurer; and if I am asked what has been the ordinary average expenditure for 10 years, it will appear that it comes within a very small number of pounds of the average annual income.

4888. *Chairman.*] What has been the average annual expenditure for the last 10 years?—The ordinary average expenditure for the last 10 years has been 1,058*l.* 16*s.* 6*d.*

4889. As against what receipts?—£.1,053. 18. 10.

4890. Give us the items of your expenditure; I mean the average expenditure for the last 10 years?—The items of expenditure, not any particular year, but the average, are as follows:—Books, printing, and stationery, 348*l.* 12*s.* 6*d.*; antiquities bought, 16*l.* 14*s.* 5*d.*; repairs, 8*l.* 6*s.* 3*d.*; taxes and insurance, 6*l.* 18*s.* 10*d.*; furniture, 10*l.* 15*s.* 11*d.*; salaries, 386*l.* 10*s.* 7*d.*; contingencies, 36*l.* 3*s.* 1*d.*; purchase of Academy Stock, 110*l.* 5*s.*; purchase of Cunningham Stock, 51*l.* 19*s.* 6*d.*; Cunningham medals, 30*l.*; coals, gas, &c., 52*l.* 10*s.* 5*d.*; total, 1,058*l.* 16*s.* 6*d.*

4891. It appears to me that the amount you have expended on antiquities (I mean the average amount), 16*l.* 14*s.* 5*d.*, is very small. Does that arise from your not having had opportunities of purchasing antiquities, or scantiness of funds?—Scantiness of funds; we have often had valuable articles brought to us which we were unable to purchase; for instance, not long ago, when the railway was in process of construction between Limerick and Ennis, the labourers came across a find of gold articles, worth above 2,000*l.*; it was wholly impossible for us to purchase these, though it would have been desirable to have added them to our fine collection; but we had to do what we have done too often, to make a private subscription to purchase some typical objects, which were put into the museum.

4892. Mr. *Lefroy.*] Was 2,000*l.* the intrinsic value of the articles, or their value as antiquities?—The intrinsic value was said to exceed 2,000*l.*

4893. *Chairman.*] Did you obtain all you required?—Only some typical objects.

4894. Mr. *Dillwyn.*] What became of the remainder?—They were bought by the collectors. Many of them found their way to England, where there was more money to buy them.

4895. Could they have been obtained for 2,000*l.*?—No doubt they could.

4896. *Chairman.*] Did you apply to the Government for a special grant to buy these objects?—I do not recollect the particular result. A small grant was made by the Government in aid of our private subscription. We have made so many applications to the Government for assistance that we must use some moderation in efforts of that kind. The Government has assisted the Academy by making grants to it for the purchase of manuscripts; and the difficulty of obtaining grants of the kind is often very great.

4897. What do you say is the amount of the establishment charges?—Out of that 1,058*l.* 16*s.* 6*d.* the establishment charges are 503*l.* 5*s.* 1*d.*, the principal item in that sum being 386*l.* 10*s.* 7*d.*, salaries.

4898. Do you consider that a large item for such an institution?—Quite the contrary. If any person was to see our establishment, which is upon a large scale, they would say these establishment charges were very moderate: the amount includes the salary of Mr. Clibborn, the assistant librarian and curator of the museum, the clerk and servants, cleaning, warming, lighting, taxes, insurance, &c. The secretaries, the treasurer, and the librarian receive the small salary of 20 guineas a-year each, which is, I think, mainly for the purpose of enabling us to retain the services of gentlemen who, from their official position, are constantly called upon to subscribe to scientific and literary objects connected with the Academy, and who might not otherwise be as well able to do that; but the salaries do not by any means reimburse their expenditure.

4899. Mr. *Lefroy.*] Is there any expense incident to the lectures?—We have no lectures.

4900. *Chairman.*] The catalogues of the Academy have been printed at a considerable expense, have they not?—The catalogue which is now in process of publication is nearly complete, and has cost a large sum of money; it has cost up to the present time 922*l.* 5*s.* 6*d.*, I believe.

4901. Are you alluding to the catalogue of antiquities?—To the catalogue of antiquities alone.

4902. Which was prepared, I think, by Sir William

William Wilde?—Prepared by Sir William Wilde, and illustrated by woodcuts.

4903. Was that expense defrayed partly by voluntary subscription, partly from the academy fund, and partly from the Government grant?—Partly from the Government grant.

4904. A special grant?—A special grant was made by the Government of 200*l.* to aid the publication of the catalogue, on the ground that it was a national work. The museum itself is a national museum; it is quite accessible to every decently dressed person who thinks fit to go and visit it, and it would be very little use without a catalogue. It was thought desirable that persons visiting the museum should find means of information and instruction in a manual such as this catalogue is.

4905. Sir *Colman O'Loghlin.*] Is this museum open to the public every day?—It is in point of fact open three days a-week, and every respectable person offering himself for admission is shown it. It appears in the Dublin newspapers in the list of objects of public interest.

4906. *Chairman.*] You consider that this museum has assumed so much of a public character, that you have a claim for further assistance on the Government for this catalogue?—I will state the financial condition of the catalogue. The Parliamentary grant was 200*l.* We had in this case, as in too many others, to make a private subscription, and we raised 175*l.* 9*s.* 6*d.* The sales of copies of the catalogue produced 241*l.* 7*s.*, so that the receipts from these three sources are 616*l.* 16*s.* 6*d.* The gross amount of the cost of producing the catalogue hitherto is 922*l.* 5*s.* 6*d.*; the difference between these two sums, viz., 305*l.* 9*s.*, has been borne by the Royal Irish Academy.

4907. You think the State ought to assist still further, and not leave you in loss with regard to the catalogue?—I think it would be quite a reasonable request to prefer, especially considering that the State supplies the catalogues which are necessary to make all the collections in the British Museum available for the use of the public.

4908. And South Kensington?—And South Kensington.

4909. Mr. *George.*] What is the selling price?—It is, of course, different from the Museum catalogues, because it is a large book, and copiously illustrated. I think it costs 12*s.* 6*d.*

4910. It is a kind of manual?—It is a kind of manual. It is a complete inventory of all the articles, and it contains a statement at the commencement of each chapter of the nature and uses of each class of things.

4911. Sir *Colman O'Loghlen.*] Have you a catalogue with you?—No.

4912. *Chairman.*] Would not the answer to your application to the State for a grant be that though the cost of the South Kensington and British Museum catalogues are defrayed by the State, your society is a private society, and that consequently there is a difference between them?—It was originally a private society, but I do not think it is now. It contributes both directly and indirectly to the benefit of the State; indirectly by the publication of papers, which extend the boundaries of science and literature, and directly by the agency of this museum, which has done a great deal to diffuse a taste for antiquarian knowledge amongst the large class of people who visit it. I may say, too, that it has actually contributed to diffuse a knowledge of art, and has given rise to the production of a great number of objects of jewellery. The jewellers of Dublin have produced broaches and ornamental objects, copied from the articles in our museum.

4913. Your museum has to a certain degree acted towards Ireland as the museum at South Kensington has acted towards England in the reproduction of works of art?—Yes; but as our museum is much more limited in its nature, it could not do so to the same extent. The number of things capable of being imitated, and which it is desirable to imitate is very small.

4914. Sir *Edward Grogan.*] Is reference to the objects freely permitted to all who apply for it?—Yes; we are anxious to facilitate anything of the kind.

5915. Mr. *Lefroy.*] You stated a certain portion of your income arose from subscription; what is the amount of individual subscriptions that make up the average of 279*l.* 6*s.* a year?—At present there are 158 annual subscribers.

4916. At how much?—Two pounds two a year.

4917. And is the subscription the same for life subscribers as for the annual?—They have paid a life composition; they add nothing to the income.

4918. I understand you that the amount of your subscriptions, together with these other funds, is a little more than the grant of 500*l.*?—Yes, our public grant falls a little short of our income from all other sources.

4919. *Chairman.*] Have you read the evidence taken before the Commission upon Scientific Institutions in Dublin, in 1862?—I have.

4920. Have you read the evidence of the Rev. Samuel Haughton?—I have.

4921. And are you aware that Mr. Haughton states that, "There is an antagonism between science and antiquities in the academy, as each department endeavours to advance its own objects, so that the progress of the society is much interfered with. In the antiquity department the money is spent on purchases for the museum; in the scientific it is spent on printing. This has created an antagonism, arising from the activity with which each branch is cultivated; that has been attended with unfortunate results. The academy is the only society in Dublin that publishes very expensive papers; but they are in want of funds, and persons who have papers requiring a large amount of illustration must send them elsewhere. The academy is, on a small scale, the Royal Society and the Antiquarian Society combined. I think both parties would be glad to have an alteration in the Charter, not for the purpose of separating, but for the purpose of dividing the grant, and making two distinct sections in the same academy. This would stop the antagonism that is at present so disastrous." Do you think that evidence gives a correct description of the state of things at present in the Royal Irish Academy?—I think Dr. Haughton a little exaggerates the amount of antagonism existing between the friends of science and antiquities. There is some difference of opinion, just what might be expected amongst intelligent and independent gentlemen, cultivating different pursuits, and each anxious that as much as possible should be done to promote the object in which they take special interest; but I could not agree in this statement of Dr. Haughton's, from which it would appear that this antagonism leads to disas-

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trous or even injurious results. I am not at all sure but that a little amount of rivalry between different parties within an institution may be attended with some good results; and since I have had the honour of holding the chair of president I have, certainly, not had any trouble in composing serious differences, or keeping the peace. I have had a happy time in that respect; and I cannot say that I agree with Dr. Haughton's view in this matter. I do not think that parties in the academy would desire to have the grant divided, and certain portions appropriated to the different sections. It would be making two bites of a cherry in the first place.

4922. And a small cherry, too?—And a small cherry, too. I should, for myself, rather go on and have our little quarrels about the distribution of the money. Let us each try to do the best we can with it. I do not apprehend any disastrous effects to the academy from letting matters stay as they are; but I do think that very disastrous consequences would arise to the academy if the grant were divided; that might lead to the division of the academy into two distinct sections, by which the interests of neither science nor antiquities would gain. I do not think that in Dublin we should have the means of maintaining two societies for these two separate objects in a state of healthful activity and with adequate means. I doubt whether we should have either intellectual or pecuniary resources sufficient. We have at present just about a fair supply of papers in the different departments, and if the academy were divided into two sections there would not be for either an adequate supply of papers, nor do I think there would be resources provided in the way of subscriptions of members. At present, both science and antiquities have benefited by the arrangement under which persons pursuing different courses in science and literature are brought into friendly relations and into intellectual intercourse. I can certainly say that the antiquarian members of the academy derive benefit from the influence of the scientific members upon them. The intellectual discipline and habits of thought of persons engaged in mathematical studies have been communicated to those who pursue antiquarian researches. The antiquarian school has thus become more scientific, and therefore more efficient, in consequence of association with a body of persons skilled in the different branches of science; I should look on it as really disastrous to the academy if it were divided, and I think the separation of the grant into parts would probably tend towards that result.

4923. You do not consider, from your position as president, that any rupture is likely to result in the present state of affairs?—I do not; I think we shall have debates as to the allocation of our funds every year; but I am not afraid of the consequences of these debates. We carry them on with good temper, and perhaps if the grant were a little increased the debates might not be so energetic. Possibly, they might be more so; but if the present state of things lasts, I do not anticipate that there would be any consequences injurious to the interests of the academy or of science and literature in the country to be apprehended.

4924. Does the Government allocate the expenditure of the money, or is it left entirely to the society itself?—It is left quite to the society. The treasurer, looking to the expenditure of past years, frames an estimate like the Chancellor of the Exchequer at the commencement of each financial year. He frames an estimate of the probable expenditure for the coming year, and this is sanctioned by the Council; and we generally keep pretty close to the budget. We have a skilful treasurer, and he generally sketches it out judiciously.

4925. Mr. *Lefroy.*] There is a large portion of the annual expenditure almost fixed, such as is devoted to the officers of the society. £. 300 is always fixed, is it not?—£. 386 *l.* 10 *s.* 7 *d.* for salaries is fixed.

4926. *Chairman.*] Then, the discussions upon the budget are pretty much like our own discussions here, when different gentlemen have each opinions of their own, and the matter generally ends by the budget of the Chancellor of the Exchequer being carried?—Our treasurer, Dr. Carson, has paid great attention to the financial affairs of the academy; and he has rescued the society from a condition much less satisfactory than that in which it now stands. By his good judgment and business habits, I think he has done good service to the academy.

4927. You stated that a small addition of public money would probably cause these internal agitations to cease?—I could not possibly promise that. I may, however, mention one good result which would arise from an addition to our means, and that is, that we should be relieved from the necessity of continually making private subscriptions for the purpose of attaining what are really public objects. Within a few years, these subscriptions have been very numerous, and of large amount. The collection of antiquities belonging to the late Dean Dawson, Dean of St. Patrick's, was purchased by subscription for an amount of 1,067 *l.* 13 *s.* This came principally from members of the academy. The Tara-torcs, worn probably in ancient times by the kings of Ireland, were purchased by another subscription for 190 *l.* 7 *s.* Professor M'Cullagh also purchased and presented to the academy the Cross of Cong, one of the most remarkable specimens of ancient Irish art. It was not exhibited in the Kensington Collection to which we sent a number of our most interesting antiquities, because it was in such a precarious condition that it was not considered safe to send it about; but it was superior to any relic of ancient Celtic art that was exhibited there; and I was told that persons well acquainted with the history of ancient and mediæval art looked with great interest at many of the objects lent by our Museum. To these I must add collections made for purchasing Irish manuscripts. One of the collections was that of Sir W. Betham, Ulster King of Arms, who left a collection of Irish manuscripts, which it was thought expedient to purchase. I was the principal agent in raising the subscription, and with very great difficulty I collected above 600 *l.*, and that sum was supplemented by an equal sum from the Government. A subscription was also raised amongst members of the academy for the purchase of the Hodges and Smith collection of Irish manuscripts. The Government granted 600 *l.* to meet a voluntary subscription of 772 *l.* 9 *s.* 6 *d.* The effect of these continued subscriptions has been (and that is what I want to call attention to) injurious, as the burden has fallen mainly on the same persons, who have come forward over and over again, and who are not persons of large means. They give, because they have got into the habit of giving, and take great

great interest in these pursuits; but the members of the academy have become sick of subscriptions, and the repeated resort to these voluntary subscriptions has had the effect of deterring persons from becoming members. The jingle of the begging-box is not agreeable, and if we were saved from that, it would certainly contribute to the dignity and general usefulness of the academy.

4928. Still I think the members of the Royal Irish Academy are increasing continually?—I could not say that; the number of members has not much increased; during the last two or three years I think there has been some slight increase of members, and this year the receipts from annual subscriptions exceeded the average receipts for ten years, which I read, but I cannot say the number of our members is increasing considerably.

4929. Do you really think this fact of the begging-box being so often sent round deters many scientific persons in comparatively straightened means from wishing to become members of the society?—It is my opinion.

4930. Mr. *George.*] Have you a statement of the gross amount of voluntary subscriptions?—I have mentioned the largest; I could mention several other small collections, and I may say at once there is one pending at present for the purchase of Irish manuscripts which were bought by Dr. Todd, as a trustee for us, in the hope that the money would be raised amongst ourselves; it will be a purchase to the amount of about 150 *l.* Every year brings with it one or two of these subscriptions.

4931. Have you made specific applications from time to time to the Government, to advance sums for the purposes of making these very valuable purchases?—Yes; I referred to two cases, in each of which the Government did grant a sum of 600 *l.*; one grant was made to assist the purchase of the Betham collection, and another for the purchase of the Hodges and Smith collection; there was also a grant towards the purchase of some of the gold articles found in Clare.

4932. In the case of the collections purchased for you by Dr. Todd, has any application been made to the Government for assistance?—No application has been made in that case; we have another application under the consideration of the Treasury at present, and we thought it inexpedient to ask for anything else.

4933. Mr. *Dillwyn.*] I think you told us there was a collection of ornaments turned up on the Limerick and Ennis Railway, and part of which were lost to the academy from want of funds to purchase them?—Yes.

4934. Ireland is rich, is it not, in these things?—Great quantities of gold ornaments have been found, and we have a fine collection in our museum as it is. The ancient Celts were fond of wearing massive gold ornaments in the shape of bracelets and ornaments for the head, and the quantity of these things found within the last 80 years has been large. I have seen calculations of the quantity that has been melted, and it has been estimated to exceed 20,000 *l.* intrinsic value of the gold.

4935. You have reason to believe that valuable collections of ornaments have been, and still are, lost to the country for want of sufficient funds to secure them for the national collections?—I should hope we have entered on a better state of things, for the Government not long since made fresh regulations with respect to treasure trove, which have worked beneficially for the academy. Within the last two or three years the articles of gold and silver found have been pretty generally brought up to Dublin, purchased by the Government, and deposited in our museum.

4936. *Chairman.*] If a person finds any of these articles at present, I believe he hands it over to the police, who send it to Dublin, and the Government purchase it?—It is valued by the Committee of Antiquities in the Royal Irish Academy, and the under secretary or chief secretary directs the paymaster of constabulary to pay the finder its fair value, that is, a value somewhat exceeding the intrinsic value of the metal. Finders now are beginning to understand that it is not their interest to cut up and secretly make away with the objects they find, as they will get from the Government a fair price.

4937. Have you taken any steps to make this arrangement generally known throughout Ireland?—We have published a circular, which has been pretty extensively distributed.

4938. Mr. *Dillwyn.*] I suppose there are many other collections of antiquities which would come under the description of treasure trove, which are equally valuable, as illustrating the history of Ireland?—They would not regularly come under treasure trove; we have, however, through the working of the treasure-trove regulations, been able to purchase several articles of that kind.

4939. Do you often lose them from want of funds?—I am sure we must.

4940. Mr. *Lefroy.*] Are there not varieties of these ornamental articles?—They vary much.

4941. *Chairman.*] Have many come in since the new arrangements with regard to treasure trove?—Yes. We have got some valuable gold articles. A jeweller who was not aware of the new treasure-trove regulations, lately sent me up some articles from Tralee, knowing I was a President of the Royal Irish Academy, he begged that I would endeavour to obtain a fair price for them. I put them into the proper channel; they were valued, and he expressed himself satisfied with the price. In this way we became the possessors of three interesting ancient gold ornaments for the head.

4942. I believe your museum is the richest and most important museum in Europe, as regards Celtic antiquities?—No doubt it is the most complete collection of Celtic antiquities that exists anywhere.

4943. That may be described as its specialty?—It may.

4944. Mr. *George.*] It is particularly rich in gold ornaments?—It is by far the most complete. I would not say it was superior to the Copenhagen collection of Scandinavian antiquities, which is much larger; but that has grown up in a comparatively short time in consequence of the great pains taken by the Danish Government to form a national collection.

4945. Whereas you have been working on private enterprise?—Until the new treasure-trove regulations came to our assistance.

4946. Have you been much aided in your museum by private donations?—We have. I have mentioned the donation of the Cross of Cong, given to us by Professor M'Cullagh; and the Dawson collection, purchased for the academy by a voluntary subscription. Now and then individuals present donations, but it seldom happens that we get very valuable objects.

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4947. Do you embrace within your museum large objects of Irish antiquity?—We have all kinds of objects. It is a collection of objects in the different metals, stone, wood, &c.

4948. Do you consider it at all to come within your functions to interfere with, or make representations with respect to the preservation of Irish antiquities, ruins, crosses, &c.?—We have not done so. It would certainly be a very natural exercise of our functions.

4949. Mr. *George.*] I believe the Kilkenny Archæological Society takes a very active part in this? — Yes; and the secretary has lately originated a subscription to save from utter destruction some of the most interesting ruins at Clonmacnoise.

4950. *Chairman.*] Do you not think representations from a body like yours, to the proprietors of those antiquities, might carry considerable weight with regard to establishing a greater amount of care and attention to their preservation?—Yes; but in matters of this kind you almost always come to the question of money. It will cost something to effect these objects. The individuals who are allowing the ruins to be injured are for the most part doing so because they have not the means of making the necessary fences and repairs; and with all our interest in objects of the kind, we could hardly undertake the conservation of the ancient remains over the face of the country.

4951. My question did not contemplate interference, but the making of representations, and calling the attention of the proprietors to the objects of antiquity on their estates?—I believe that the Academy, by such representations, would contribute in a very important way towards the result that you speak of, and I think it has been done occasionally, though not in a formal manner; for instance, quite recently a paper was read before the Academy by Mr. Conwell, who described the opening of sepulchral mounds in the county of Meath, and stated that some of them had been defaced and destroyed. This fact was commented on by the Academy; the matter, being noticed in that public way, came to the ears of one of the proprietors where this Vandalism occurred, and he stated his regret, and promised to take care that nothing of the kind should take place again.

Jovis, 23° die Junii, 1864.

MEMBERS PRESENT:

The O'Conor Don.	Mr. Lefroy.
Mr. George.	Sir Colman O'Loghlen.
Mr. Gregory.	Sir Robert Peel.
Sir Edward Grogan.	Mr. Waldron.
Mr. Leader.	Colonel Luke White.

WILLIAM HENRY GREGORY, ESQ., IN THE CHAIR.

The Very Reverend Dr. CHARLES GRAVES, D.D., called in; and further Examined.

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4952. *Chairman.*] IN regard to the museum of the Royal Irish Academy, you are rather restricted for space, are you not?—The room at present appropriated to the purpose is filled with cases, and the room is not so circumstanced as to supply sufficient light for the advantageous exhibition of many of the objects. It is quite certain that we require more space, even for the exhibition of the objects we at present possess, and as the museum expands, further accommodation will certainly become necessary.

4953. You have a room in the present structure which would be suitable for such purposes, have you not?—We have.

4954. What is the size of the present museum?—I do not know the exact dimensions of it; it is a large room, with a gallery round it, having cases below-stairs and above; a room about 30 feet or 40 feet square. There is also a large room occupied by the library.

4955. Sir *Colman O'Loghlen.*] There are three rooms, are there not; the room containing Moore's library, the museum, and the room containing the general library?—Yes.

4956. Sir *Edward Grogan.*] Practically you find inconvenience for want of room?—We can hardly say that the difficulty has begun to make itself yet felt in a very pressing way, but we require further room for the expansion of our museum, and after a little time we must have a good deal more accommodation.

4957. *Chairman.*] You have a room, have you not, called the Tea-room, up-stairs, which would be perfectly adapted for the purposes of a museum, having a large area, and a southern and western side light?—A very suitable room.

4958. Which could be adapted for museum purposes at a small expense?—Which could be adapted to those purposes at a very moderate expense.

4959. Sir *Edward Grogan.*] Would that room be suitable for the reception of such heavy specimens as your museum consists of?—The room up-stairs might not be suitable for the heavy antiquities, but arrangements might be easily made for exhibiting those below-stairs.

4960. *Chairman.*] You might put the lighter specimens up-stairs, and the larger and heavier ones below?—Certainly.

4961. What is the amount that is now annually allocated out of your funds to antiquities?—We allocate only the sum of about 50*l.* out of the funds of the Academy. I ought to say, with regard to that, that I committed an error in my examination on Monday; I took the sum stated in the account as expended in this last year for the average for 10 years. The average for 10 years past was about 87*l.*

4962. I think you stated in your last examination, that the average amount per annum for the last 10 years was 16*l.* 14*s.* 5*d.*?—Yes, that was the sum spent in the current year, and not the average.

4963. I understand you to say that 50*l.* is the annual amount appropriated to what I may call antiquarian purposes?—A grant to that amount is recommended to be made by the Academy. A recommendation to that effect goes from the Council to the Academy, and the Academy always allocates a grant to that amount.

4964. If the 50*l.* is not expended, do you carry over the balance to the credit of the antiquities department of the society for the following year?—I think not.

4965. Would it be advisable to do so?—I think it would be advisable that we should expend considerably more than 50*l.* a-year upon the museum.

4966. Mr. *George.*] Does a year ever pass during which more than 50*l.* might not be expended by the society?—I think scarcely any year has passed in which we have not had an opportunity of spending a much larger sum.

4967. *Chairman.*] If 50*l.* is annually allocated to the antiquities department of the Royal Irish Academy, how came it that last year only 16*l.* odd was spent?—That is the current year, commencing the 16th of last March. Since that time the sum of 50*l.* has been allocated by the Academy, and doubtless, in the course of the year ending 16th of next March, that sum will be spent.

4968. Sir *Edward Grogan.*] That 16*l.* is what was spent up to that period of the year at which the account was taken; it is not supposed to represent the entire expenditure of the year?—No.

4969. *Chairman.*] In regard to the library what is the character of the books of which your library consists?—It contains, in the first place, a very considerable collection of Irish manuscripts. It contains the collections which were made by the Ordnance Survey Department, when it was in contemplation to publish, in connexion with the Ordnance Survey, a topographical memoir of Ireland. That great enterprise having been given up, the papers remained a considerable time in the Ordnance Department at Mountjoy, and finally the military authorities deposited them in the library of the Royal Irish Academy,

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where they form a very valuable accession to our manuscript stores.

4970. Sir *Edward Grogan.*] Some years ago, was not there a volume published from those sources, with respect to one of the parishes of Londonderry?—Yes.

4971. That volume was published from the collections made by the Ordnance survey at that time?—Yes.

4972. Similar collections were made in different parts of the country, were there not?—Yes.

4973. Are those the papers which you allude to?—Yes.

4974. Are they all now in the care of the Royal Irish Academy?—A considerable selection from them; volumes of letters and antiquarian sketches, but not all the papers; they would form an immensely voluminous collection.

4975. Mr. *George.*] Was there only one volume published?—Only one.

4976. Sir *Edward Grogan.*] Can you state the reason why the publication was discontinued?—I believe there is no question that the reason was the expense. It was necessary to train a very considerable staff of scholars, and to employ persons of learning and ability in many different departments, topography, both ancient and modern, natural history, and so forth. It was intended to make it a complete topographical memoir; and the expense, I believe, of completing it deterred the Government from prosecuting the design. The design was a most admirable one, and the specimen that was given by the first volume showed that the completion of it would have been attended with great national benefit.

4977. You have, perhaps, examined the manuscripts and drawings that have been deposited in the library of the Academy, or some of them?—I have made frequent references to them.

4978. Have you any doubt whatever that they are of vast importance in the elucidation of the ancient history and customs of the country?—Not the slightest.

4979. Do you consider that the expense, though it might be considerable, of continuing the publication of that topographical memoir is a sufficient or just reason why the publication of it should not be continued?—I do not venture to say, whether it is an object that the Chancellor of the Exchequer would think of first-rate importance; but I would say that it is an object which all scholars, well acquainted with the nature of the manuscripts themselves, and understanding what is to be expected from a nation in the way of putting forward an account of its own topography, would expect to see completed. Such a work would have been certainly completed in France, if such adequate materials for the execution of it existed in that country.

4980. Is it within your knowledge whether any similar collections relative to any part of Great Britain have been published at the expense of the State?—I think no work precisely similar to it has been published in England.

4981. Did I understand you rightly to state that there was a difficulty in getting competent men to translate and prepare those notes for publication?—It was necessary to employ persons well acquainted with the Irish language to collect topographical information. A great deal of it had to be procured by the examination of old people who could only speak Irish and who knew not only the ancient names of places, but who were able to give information with respect to those places. It was also necessary to have the assistance of persons who were able to read ancient Irish documents, in which references were made to places, and to the history connected with them.

4982. Has your society ever forwarded any application to the authorities in this country, urging upon them the desirability of publishing that work, as one of the greatest importance to the interests of Ireland?—I do not think that the Academy as a body have forwarded any such application or representation, but I know that persons connected with literature in Ireland made their influence privately felt, with a view to the accomplishment of the object; but it was without success.

4983. Mr. *George.*] Do you know what the cost of publishing that single volume was?—I do not. But I could imagine that the cost of producing the first volume of such a series would be enormously greater than that of any of those that followed.

4984. *Chairman.*] Would not a representation of that character, coming from so important a body as the Royal Irish Academy, command greater attention from the Government than if it emanated from a number of individuals?—I should hope and believe it would.

4985. Sir *Colman O'Loghlen.*] I believe that all those memoranda are kept in a separate case at present?—Yes.

4986. They are not at present in a state fit for publication?—No.

4987. Mr. *George.*] The expense of collecting the materials for publication has, in fact, been already gone to?—A great portion of it.

4988. All that is required is to translate, compile, and arrange them for publication?—I cannot say that I am so familiar with the whole matter as to be able to say what proportion the additional expense would bear to what has been already incurred.

4989. A great deal of expense has already been incurred in compiling and preparing the materials that would be useful for the publication of the remaining volumes, similar to the one which has been already published?—No doubt.

4990. Sir *Edward Grogan.*] Have you any doubt that if adequate funds for such publication were forthcoming, there would be found competent parties to arrange the materials for publication, and undertake the necessary translations?—In consequence of the deaths of Dr. O'Donovan and Professor O'Curry, who held important places in that department, and who were employed on that work, I think there would be difficulty experienced at first; but if reasonable remuneration were offered, I think it would be possible to procure the assistance of competent persons. The knowledge of the vernacular language has not yet perished; and after a little training, persons having a knowledge of the vernacular language, and also some acquaintance with Irish manuscripts, would be able to render efficient services in this particular way.

4991. *Chairman.*] As the vernacular language is dying out, do you not consider it expedient that a matter of this kind should be taken in hand with as little delay as possible?—I do; and it was because I was so convinced of that that I made great efforts, in conjunction with Dr. Todd, in persuading the Government some years ago to undertake the project of the publication of the Brehon

Brehon Laws; I knew that that was of immense consequence, as bearing on the history of the country, and that, unless it was attempted soon, the want of a knowledge of the vernacular would impose very serious difficulty in the way of those who might be hereafter employed on the work.

4992. Mr. *Waldron.*] Is it not the fact that a great many extracts were made from very old Irish manuscripts, by the late Dr. O'Donovan and the late Professor O'Curry, which extracts are among those papers to which we have been referring?—Yes; they were employed to make extracts from a number of manuscripts and printed works which were thought useful in illustrating the topography of particular parts of the country; those collections were made and bound together; besides that, when they were travelling over the ground, they wrote letters, giving an account of all they saw and found on the spot, or were able to gather from the evidence of intelligent persons. These letters were bound together, and we have volumes of them relating to the topography of the entire of Ireland.

4993. Those letters, I believe, contain amongst other matters, traditions which they collected from persons who could not speak English?—Yes.

4994. That being the most difficult part of the task, and that being already performed, do you think that the expense of continuing the work for the rest of Ireland, which was begun as regards Londonderry, would be comparatively insignificant?—I would hardly venture to say that it would be insignificant, but even if it were considerable, I think it is a kind of work that ought to be executed by the nation.

4995. Are you not, however, of opinion, that all that work having been already done, the cost of the publication of the succeeding volumes would not be at all in proportion to the cost of the first?—That is my opinion.

4996. Mr. *George.*] Are all the collections that were made with that view, in the keeping and care of the Royal Irish Academy?—Not all the collections; the remainder are at Mountjoy; I have seen great quantities of them lately.

4997. They are all in safe keeping, and ready for use?—Yes; only parts of them are indexed and bound; the most important parts have been indexed and bound, and presented to us. There is a large mass of matter which was gathered by the persons who travelled over the country: rough sketches, memoranda, and documents, that were thought of less importance, which are retained at Mountjoy.

4998. How much of Ireland do the collections in the two places, the Royal Irish Academy and Mountjoy, embrace?—I have no doubt they embrace the whole of Ireland.

4999. Mr. *Waldron.*] Mountjoy is the depôt of the Royal Engineers and of the Ordnance Survey in Ireland?—Yes.

5000. Sir *Edward Grogan.*] Those papers are memoranda in a perishable shape, are they not; that is to say, they are on slips of paper?—They are, in general, on detached pieces of paper; but they are well taken care of.

5001. No doubt every care that the department can take, is bestowed upon them; but from their nature, they must necessarily be of a perishable character, more or less, must they not?—That is true. I should doubt whether the less important documents are indexed; probably they are neither indexed nor bound, but they are made up carefully into bundles, and labelled with the name of the district to which they severally refer.

5001.* If by accident from damp or fire, any of those original memoranda should chance to be lost or damaged, it would not be possible to replace them, would it?—I should say that it would be impossible.

5002. Mr. *Waldron.*] A great many of them are on very thin tracing paper, are they not?—Yes, a great many of them are.

5003. *Chairman.*] Would the Royal Irish Academy be desirous of receiving the remaining portion of those documents that are now at Mountjoy?—The Royal Irish Academy would, I am sure, value any accession of that kind to its stores. The volumes which we have already obtained from Mountjoy are frequently consulted, and felt by us to be of very great value and interest.

5004. You consider that the Royal Irish Academy would be well disposed to accept the custody of them?—No doubt of it. If there is no chance of their being made available in the publication of a great topographical memoir, I could conceive no better way of disposing of them than depositing them in the library of the Academy.

5005. Has the Royal Irish Academy acted in conjunction with the Government Commission in the publication of the Brehon Laws?—The Royal Irish Academy has no immediate connexion with the Brehon Law Commission; but it has manifested its willingness and ability to assist in the publication of the Brehon Laws, and that on more occasions than one. In the first place, in the year 1824, the Royal Irish Academy proposed a medal as a prize for the writer of the best essay upon the laws, and that prize was obtained by Mr. O'Reilly, the author of "O'Reilly's Dictionary;" and when the Brehon Law Commission was established, the Academy assisted very materially in the accomplishment of the work by lending its manuscripts to the Brehon Law Commissioners, who were thus able to carry on their work with more rapidity and convenience than they otherwise could have done.

5006. The publication of the Brehon Laws was not in any way officially conducted by the Royal Irish Academy?—No; not officially conducted by them in any way.

5007. Your library is very rich in transactions of the different learned societies, and in Irish literature in general, is it not?—We have a tolerably good collection of the Transactions of Learned Societies and Scientific Journals, and we have also a growing collection of works printed in Ireland, or relating to Ireland. Those are the two departments in which our library is strongest, and they are the departments in which the greatest efforts ought no doubt to be made to complete the library.

5008. You would wish to give your library a speciality?—Yes. It would be desirable to make it tolerably complete in those classes of books, giving up the attempt to complete it in other departments in which perhaps students can obtain the necessary assistance from other libraries, as, for instance, those of the University, the Royal Dublin Society, the King's Inns, and so on.

5009. How is access obtained to your library?—Access is very easily obtained to our library; in fact, so easily, that it may be regarded as an open library. Any respectable person presenting himself at the academy, and asking permission from the assistant librarian to read in the library,

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is admitted. The rule is, that it is necessary for a person seeking admission to the library to obtain a recommendation from a member; but that rule is by no means insisted upon. I say, advisedly, that any respectable person presenting himself will be admitted to read in the library by the assistant librarian. The only thing standing in the way of making our library still more available for the use of the public, is our want of a sufficient staff. We have only one servant under the assistant librarian, who has also to look after the museum, and transact a great deal of the general business. With so inadequate a staff, it is wholly impossible for us to make the library so available as it might be made.

5010. I presume you would consider it necessary to have an officer to superintend the museum alone, would not you?—I think that there ought to be a curator of the museum constantly in attendance, whose business it should be to look after the safe keeping of the objects in it, and to give useful information to visitors, in order that they might be able to turn their visit to profitable account. So, again, in the library, there is an absolute need of an assistant to procure books, and, to do a great many things which visitors would require. I hold in my hand a report of the Library Committee, stating that funds are much wanting, to render the library useful for the objects of the academy; and they set forth the following requirement:—"The permanent employment of an attendant, specially for the library, to receive and deliver books, superintend readers, call in outstanding volumes at stated periods, and discharge other similar duties for the library alone. The employment of such an assistant appears to the Committee requisite, especially for the safety of the manuscripts consulted by readers, and the recovery of lent volumes within a prescribed period." I should mention, with respect to the safety of manuscripts, that we are obliged to lay down rather more stringent rules with respect to the use of manuscripts, than with respect to the use of books, because it was found in former times, that some of our manuscripts were tampered with by persons who were permitted to have access to them; therefore, much against our will, we are obliged to impose some restrictions with respect to the use of the manuscripts.

5011. Have you any manuscripts of any great value or antiquity?—The time of the Committee must be so valuable, that I should be unwilling to answer that question in detail. I should have to mention several manuscripts of very great antiquity and interest.

5012. Generally speaking, are they of great value?—I should say in a rough way, we have five or six manuscripts, the ages of which are from 400 to 500 years each, and which contain a great bulk of the now existing ancient Irish records. One of those books is the Book of Ballymote; the value of which is indicated by the fact that it was sold for 140 milch cows in the year 1522. Another manuscript, which is in the library, was the occasion of the siege of Sligo, which was undertaken by O'Donnell in 1470. To recover that manuscript and another, the siege was undertaken.

5013. Sir *Edward Grogan.*] How did that book come into the possession of the town of Sligo?—It had been given in ransom for O'Dogherty, and the son of O'Donnell's chief poet; and O'Connor retaining those manuscripts, O'Donnell endeavoured to recover them from him by force.

5014. They were so highly valued that the ransom of two distinguished individuals was given for the acquisition of those books?—That is so.

5015. And, afterwards, a kind of civil war arose in that part of the country for the possession of them?—Yes.

5016. Will you name any other valuable manuscript in the possession of the academy?—Another manuscript is what is called the "Book of Lecan." James the Second, leaving Ireland in his haste, carried with him the Book of Lecan to Paris. It was deposited in the College of the Lombards till 1787. The Irish Academy, being then only one year old, sent over to the college of the Lombards, asking permission to transcribe this manuscript, and the college of the Lombards in the most liberal manner, instead of granting leave to transcribe the book, made a present of it to the Royal Irish Academy. That book is 400 years old; and it must be a most valuable one, seeing that James the Second carried it off to France in his flight.

5017. Sir *Colman O'Loghlen.*] In addition to the library proper of the Royal Irish Academy, have not you the Moore Library also?—Yes; which was given by Mrs. Moore, the widow of Thomas Moore, the poet.

5018. Was it given to you absolutely, or do you merely hold it in trust?—It was a gift.

5019. It is kept in a separate room, is it not?—Yes.

5020. Mr. *George.*] Are there any more of those remarkable manuscripts which you would like to specify to the Committee?—There are others. There is an autograph copy of the annals of the "Four Masters;" and there is also in the possession of the Royal Irish Academy the "Leabhar Breac," or "Speckled Book," of the M'Egans, of the date of 1330. That is one of our most valuable manuscripts. It contains a large collection of miscellaneous matter, and a quantity of religious poems and discourses.

5021. Sir *Edward Grogan.*] Those manuscripts which you have been describing are all original manuscripts?—Yes, everyone that I have mentioned.

5022. Mr. *George.*] Are they all in the Irish character?—They are.

5023. Mr. *Lefroy.*] Do you lend out books from your library?—Yes.

5024. You have two classes of books, have you not; a class which you lend out, and a class which you do not lend out?—Yes.

2025. What are your rules as to lending out; for what length of time are books allowed to be kept?—Books must be returned within a month; but the rule is not very regularly enforced.

5026. Can new books be lent out?—No; periodicals are not lent out till sometime after their publication.

5027. What length of time do they lie upon the table?—It depends upon the intervals at which they appear; monthly periodicals are not allowed to be lent out till they have laid on the table for a month; generally speaking, a periodical ought to lie upon the table till it is replaced by the succeeding number.

5028. What class of books is it that you do not lend out under any circumstances?—Very rare books, and books of reference.

5029. All others you do lend out?—Yes.

5030. Do you think that the plan of lending out

out is attended with great benefit?—To students it certainly is.

5031. Do you consider that that plan is more profitable than the plan of requiring readers to read in the library?—I was talking upon the subject yesterday with Dr. Todd, and he stated that his power of borrowing books from our library had been of the utmost possible importance to him in his studies; in preparing his life of St. Patrick, he had frequently to refer to a volume which we have in our library, which is extremely rare; I have been trying to procure a copy of it for the last 25 years, and I have not succeeded in procuring it.

5032. Mr. *George.*] What is that book called?—Two volumes of "Irish Hagiology," "Colgan's Trias," and "Acta Sanctorum."

5033. Mr. *Lefroy.*] Do you lend out the books by sets or by volumes?—I think in general by volumes.

5034. Have you found that the system of lending out books is attended with inconvenience to readers or students requiring to refer to books, or attended with injury to the books themselves?—I do not think that we have reason to complain of injury being done to the books, but sometimes inconvenience has been felt by one member requiring a book which has been borrowed by another.

5035. You do not think that that inconvenience is so great as to outweigh the benefit that is derived by those who avail themselves of the privilege of taking books home?—I do not think that it is; I should be sorry to give up altogether the privilege of borrowing books; it might be necessary to restrict the enjoyment of the privilege; it might be advisable, for instance, to diminish the time that a member can keep books; I think for students engaged in important researches it would be desirable to maintain the privilege.

5036. What are the restrictions under which the books are lent out; who gives permission to take books away from the library; is it the librarian or the council?—The librarian has charge of the books; it is not necessary to make any application to the council; the librarian or the assistant librarian is on the spot, and if I want a book he hands it to me on my filling up a docket.

5037. Mr. *Waldron.*] Has each member the right to take a book home?—Every member has the right.

5038. The librarian is merely the officer who hands the book to you?—Yes; and who takes from me the receipt for the book.

5039. Mr. *George.*] Is there any limit to the number of books that a member may take out?—I have had as many as six or eight at a time.

5040. *Chairman.*] The privilege of taking out books is restricted to members of the academy?—Yes.

5041. In no case is a book lent out except to a member?—I think in no case.

5042. Sir *Colman O'Loghlen.*] Have you ever heard any complaints of scientific books being taken out previous to fellowship examinations in the college?—I think I once heard a complaint of that kind, but it did not appear to me that the system had operated injuriously; I heard of a case where one member happened to want a volume which another member had borrowed.

5043. *Chairman.*] You have published a large number of volumes of your transactions, have you not?—Yes; we have published about 24 volumes of transactions, and seven volumes of proceedings. The proceedings are in octavo, and the transactions are in quarto. The transactions contain the more important papers. Many of those are contributions to science of the utmost value; papers by Sir William Hamilton and Dr. Lloyd, for instance, and by many others of our most active members.

5044. What is the distinction between the proceedings and the transactions?—In general, the proceedings contain an account of what is done at each evening meeting of the academy, giving abstracts of papers read. Many of those papers are not thought to be of such importance as that it is desirable to print them in extenso in the transactions, so that the proceedings contain records of communications of which no account is given in the transactions. Sometimes persons who read a paper are anxious to have it published very promptly; and as that object would be more readily attained by publication in the proceedings than in the transactions, the proceedings became a favourite vehicle of publication.

5045. What is the process gone through with respect to publishing papers in the transactions?—A paper having been read, is referred to the committee of publication, who have to decide whether it is to be printed or not. The committee refers the paper to some competent person to report upon it, and he reports whether it is of such importance that it ought to be published. The committee of publication also obtains estimates as to the cost of publishing it, and perhaps illustrating it, if it requires illustration. The committee of publication then makes a report to the council upon the paper, either recommending the council to publish it if it thinks fit; or declining to recommend the publication of it. That recommendation having come up before the council, the council ballot as to the printing of the paper. Each member takes a solemn declaration that in the ballot he is about to take part in, he will give his vote without partiality or prejudice. The ballot then takes place, the balloting papers being put into an urn, and by that ballot it is determined whether the paper is to be published or not.

5046. As a general rule, are papers recommended for publication by the Committee, published?—I do not recollect the case of any paper being rejected which was recommended by the Committee of Publication.

5047. Are those publications expensive?—Some of them have been very expensive. Long and elaborate mathematical papers are very costly to print; but we have endeavoured to print them. I think we have not rejected any paper of the kind, because it would be expensive to print it. Some of the papers requiring illustration are also very expensive to print. I may refer for instance, to the twentieth volume of the Transactions, which contains Dr. Petrie's celebrated essay upon the Round Towers; that was felt to be one of the most important contributions to archæological science made in our times, and the academy published it regardless of expense. That volume cost 676 *l.*; another paper was lately published, giving an account of Mr. Mallett's experiments upon his great mortar, a subject of national importance, and that paper cost as nearly as I can remember, about 230 *l.* A recent paper by Mr. Hardinge on Mapped Townland Surveys, containing a vast deal of information useful to the public, with respect to the history of property in Ireland, was published by the academy at a cost of 100 *l.* I mention those things, wishing

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the Committee to understand how difficult it is for us to carry on our operations when every now and then we have to publish works of such great cost. The annual sum available for that purpose being only about 380 *l.* a year.

5048. Are there any particular matters in the Reports of the Committees, which you would wish to bring to our notice?—I have touched upon some of those already, but the five working Committees managing the departments of science, polite literature, antiquities, the library, and the publication of papers, lately reported to the council at large upon the desiderata in their several departments. The Committee of Science point the attention of the council to the fact that science might be greatly advanced in Ireland, if it had funds at its disposal, sufficient to enable it to procure from time to time scientific reports relating to Ireland, such as tidal, magnetical, or meteorologicals reports; a member of the Committee of Science is at present in the room, the Rev. Mr. Jellett, and from him the Committee will receive any further information upon that topic which they may desire; he being well acquainted with the history of the academy in that particular department. The Committee of Polite Literature call the attention of the council to the fact, that the body of Irish manuscripts (of which I have just spoken), are not as available as they ought to be in consequence of their wanting indexes and catalogues; and that a great many of them ought to be printed and published, accompanied by translations; and they suggest that these objects might be attained by the permanent employment in the Academy, of a competent person acting under the superintendence of the council. They notice that "there are very few persons capable of rendering assistance in the execution of such a work, as a vernacular knowledge of the Irish language, and a familiar acquaintance with Irish manuscripts, are qualifications only in rare instances united in the same individual. The committee, therefore, urge the importance of making prompt and energetic efforts to realise the project which they have submitted for the consideration of the council." That matter has been brought before the notice of Her Majesty's Government, in a memorial addressed to the Treasury. Irish scholars regard it as a matter of very great consequence indeed; and, for this purpose, a special increase of the funds of the Academy to the amount of 200 *l.* a-year was asked, in order that gradually the very important and interesting manuscripts I have already given some account of, might be published with translations. In favour of such a project it might be stated, that the Government has already recognised the importance of these collections by contributing towards the cost of purchasing the manuscripts. I mentioned, in my examination on Monday, two or three instances in which the Government had so contributed.

5049. Sir *Edward Grogan.*] That application was for 200 *l.*?—For an increase of 200 *l.* a-year for that purpose. I think it unnecessary to refer to the recommendations of the committee of antiquities; as Sir William Wilde, a member of that committee is present, and will be able to speak more particularly of that department of the Academy than I can. I have already named one requirement of the library committee. They also recommend the purchase of additional journals, the completion of imperfect sets, and the occasional purchase of expensive books. The committee of publication shortly report, "That considerable embarrassments have been experienced during the past two years, in consequence of the very limited funds at our disposal not allowing an adequate expenditure, either on printing or illustrating valuable papers read before the Academy." The knowledge that our funds, available for the purposes of printing are so small, really operates in the way of deterring persons from coming forward to read papers. I do not say that I can refer to particular instances to show that papers read have not been printed, because we have not the means; but I certainly know that members interested in the working of the society are slow to bring forward papers, when they know that there is great difficulty in providing means to print them.

5050. *Chairman.*] Is it the case, that occasionally at your evening meetings, there are no papers to be read?—It is very seldom the case.

5051. If it has happened, has it happened from the causes to which you have referred, rather than from indisposition on the part of members to read papers?—I should say it was from the causes I have alluded to. There is a great deal of literary and scientific activity amongst the members of the Academy; and I think if we were quite sure that there was money to print valuable papers, there would be no lack of such papers read.

5052. Mr. *George.*] How often do those meetings take place?—Twice in the month during eight months in the year, with the exception of the holidays at Christmas. There are 14 meetings in the year.

5053. Sir *Edward Grogan.*] Have any instances come within your knowledge in which antiquarian or scientific papers have been read by members of your society in this country, instead of in your society, owing to the difficulty of getting them published?—I have heard such statements; but I have never been able to obtain satisfactory proof of papers having been sent away from us for that reason. I think it very likely it has happened, but I cannot state that any such case has occurred within my own knowledge.

5054. It is not an impossibility, at least, owing to the difficulty of getting them published?—Certainly not.

5055. Is any statement to be found among the reports of your society to the effect that such papers have been read in this country, owing to the great facilities afforded here to the writers for publication?—I have heard that stated by members; there is nothing to that effect upon our records.

5056. Is not it an injustice to Irish talent, that it should appear in an English society and not under the auspices of your society?—It is a loss to our society, and diminishes the dignity and usefulness of our proceedings, no doubt.

5057. *Chairman.*] Have you ever heard any complaints as to the mode in which the cash accounts of the Academy are kept?—I do not think I have. They are kept under the superintendence of the treasurer, Dr. Carson, who is a very careful and intelligent treasurer.

5058. I find this statement in a letter addressed to me: "It would be agreeable to the members of the Academy, as well as a wholesome check upon the accountants, were the receipts and payments entered in the cash-books at the respective dates of receipt and payment. This has not been, and is not now the practice. There is always a month intervening between the time of receipt and payment and the date of the entries in the cash

cash account; and if there exists any other record of these transactions, it is private and illegitimate." How far do you subscribe to that statement?—It must refer to some particulars with which I am not acquainted. As regards the accounts, I am only cognisant of this general fact, that the accounts are audited monthly.

5059. Sir *Edward Grogan.*] Is there any committee to superintend your accounts?—Yes; there is the Committee of Economy, which superintends the accounts, orders bills to be paid, and so forth.

5060. Is there any officer of the Academy authorized to make payments without the sanction of the committee?—I think it very likely that at times, to meet the pressure of a tradesman, the assistant secretary might advance money, counting upon an indemnity from the Committee of Economy, or the treasurer; but I have never heard of any complaint of irregularity in the matter of our payments.

5061. Such an advance would come under the head, perhaps, of petty cash?—I am not myself very conversant with the mode in which the accounts are kept; but as they are audited monthly through the Audit Office, and as there is a Committee of Economy, and a very accurate treasurer, I have never felt any uneasiness as to the mode in which our accounts are kept.

5062. Mr. *George.*] You have never heard any complaint, either from the Audit Office or from your own Finance Committee, as to your accounts?—No; I think not; at least, nothing that remains upon my mind as indicating that there had been any irregularity.

5063. Sir *Edward Grogan.*] The audit accounts are open to the examination of any member, I presume?—They are.

5064. *Chairman.*] As this statement comes from Mr. Hardinge, of the Landed Estates Record Office, Custom House Buildings, and is officially addressed to me as chairman, you would, probably, think it worthy of attention?—Certainly. He is a gentleman of ability and intelligence; and I am quite sure that there must be fact upon which any statement to that effect is founded, if coming from him. I ask leave to hand in an abstract of the income and expenditure of the Royal Irish Academy for 10 years. (*The same was handed in.*—Vide *Appendix.*)

5065. Sir *Edward Grogan.*] You stated that you made an application for an increased annual grant of 200 *l.*?—That application was for the special object defined in the application?—Yes.

5066. You did not mean it to be understood that if that were granted, you would be able to place the society in good working order?—By no means; that application was made because we thought the question was urgent with respect to our having additional assistance to make our Irish manuscripts available for the public use.

5067. Mr. *George.*] Who are the Commissioners for the publication of the Brehon laws?—The Lord Justice of Appeal, the Right Honourable Joseph Napier, the Chief Baron of the Exchequer, Lord Talbot de Malahide, the Earl of Dunraven, Lord Rosse, Lord Monteagle, Sir Thomas Larcom, Rev. Doctor Robinson, Dr. Petrie, Dr. Todd, and myself, I being the Secretary. I may perhaps have omitted a name.

5068. There has been a return made to Parliament, containing full information as to the progress made in the printing and publication of the Brehon laws?—Yes; I have in my hand some of the proof sheets of what will be the first volume (*handing them to the Committee*).

5069. I observe that upwards of 300 pages have been printed?—Yes.

5070. What proportion is that first volume of the entire work as intended to be published?—About one eighth of the entire; the volume, a portion which you have in your hand, is the first part of what is called the "Senchus Mor," a code of laws compiled in the time of St. Patrick.

5071. Have you any idea how long it will take to complete the publication, on the supposition that funds are adequately supplied for the purpose?—The work is so extremely difficult, that I have great hesitation in making an estimate of the time; those who have not been engaged in the work, cannot imagine how difficult it is.

5072. In fact, there is no practical impediment at this moment to the work proceeding at a fair ordinary rate, provided that ordinary funds were supplied for the purpose?—No.

5073. Has there been any deficiency of funds hitherto in carrying out the publication?—No; there has not been inasmuch as in every year the Government has granted more money than the Commissioners have expended. This year there was no estimate sent in. Owing to the death of Professor Curry and Dr. O'Donovan, our progress was so slow, that there was a balance remaining, enough to tide us over this year; next year it will be necessary to put a sum into the estimates.

5074. Sir *Robert Peel.*] Do you anticipate that you will be able to secure anybody in the place of Dr. O'Donovan and Professor Curry?—No person who will at all replace either of them, but I have heard of two or three scholars making very considerable progress within the last couple of years who, I have little doubt, will be able to render efficient help.

5075. Mr. *George.*] How much more do you suppose will be published during the coming year?—As in the case of the Ordnance Survey Memoir, the first volume being much more difficult to bring out than any succeding one; I should say that one volume or possibly two volumes might be brought out in the course of next year.

5076. The whole will be in how many volumes?—Eight volumes.

5077. Mr. *Waldron.*] The manuscripts have been copied by photo-zincography, have they not?—No; they were printed by the anastatic process.

5078. Were not a certain number of facsimiles of the manuscripts made by Dr. O'Donovan and Professor O'Curry, some of which have been deposited in public libraries and elsewhere?—They have not been yet issued; they are available for that purpose, but they will not be issued as long as the work of the commission is in an incomplete state.

5079. It is intended, is it not, to deposit in certain public libraries those facsimiles of transcripts made by those eminent Irish scholars?—Yes.

5080. With regard to those manuscripts towards the purchase of which the Government have contributed; I think you in your inaugural address directed the attention of the academy to the importance of bringing in the aid of photozincography to the diffusion of Celtic literature, did you not?—I did recommend such a step; I thought as Domesday Book had been reproduced in that way, it would be very desirable to have some

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some of our most important Irish manuscripts photo-zincographed. It would not be a very expensive thing. It appears from a statement of the chief officer of the Ordnance Department here, that it could be done without any very great outlay, and it would be of very much more value to scholars to have facsimiles of ancient manuscripts than to have them printed, because the manuscripts themselves are full of abbreviations, and often questions arise as to how those abbreviations are to be lengthened. If you send out photo-zincographs of those manuscripts, the public would have what would be the same as the original, and it would then be for good scholars and competent authorities to say how the words were to be read.

5081. They find at the Ordnance Survey Office, at Southampton, that those copies by photo-zincography can be produced at a very trifling expense, do they not?—I have read a statement from Colonel Sir Henry James to that effect.

5082. You are aware, probably, that perfect facsimiles of Domesday Book of some of the counties have been sold at about 3*s.* 6*d.* a volume?—I do not remember the price exactly, but I know the price is inconsiderable.

5083. Do you not think, seeing that the Government has already expended a considerable sum of money in purchasing those manuscripts, that it would be a judiciou outlay on their part to make those manuscripts available to the public by publishing facsimiles of them by photo-zincography?—I think as the Government has gone to the expense of purchasing them, it would be a very natural further use of money to make them available in the way you propose.

5084. Have you reason to suppose that that process could be successfully practised in Ireland?—I have no doubt it could; there is a well trained and intelligent staff at Mountjoy, where they are engaged in all kinds of scientific processes in connexion with the survey. The production of the electrotype plates, from which the Ordnance maps are printed, requires a great deal of skill. They have a most accomplished staff of persons there, and I am perfectly sure it could be done without much difficulty and with little outlay. Perhaps I ought not to express an opinion so confidently, but I was lately in communication with the head of the department in Ireland with respect to similar matters, and I think I should not compromise him by saying that he would be quite able to carry out work of that kind. Whether he has time at his disposal, or whether he has sufficient staff to carry out all the details, I could not say.

5085. You have seen, probably, the results of the experiments that were made at Mountjoy in photo-zincography?—I did not know that the specimens I saw there had been actually executed at Mountjoy.

5086. Your opinion is (and, perhaps, you can speak for the Academy, inasmuch as you brought it before them on the occasion I refer to), that it would be of great importance that many of those old manuscripts should be copied by this process?—It is the opinion of those members of the Academy who take the most interest in those pursuits, that it would be desirable. I may mention that one of the most distinguished Irish scholars in existence, Mr. Stokes, objected very much to our printing the text of the Brehon Laws as we have done, without noticing what was the original condition of the text, that is to say, without noticing how far the original words were contracted. He considers that the published volume would not have the authority that it ought to have in consequence of the original abbreviations not being noticed; whereas, if facsimiles had been obtained by photo-zincography, they would have gone out to scholars, and would have been perfectly trustworthy in every matter of detail, however small.

5087. *Chairman.*] Have you seen the Report upon the Royal Dublin Society, the Museum of Irish Industry, and the system of scientific instruction in Ireland, drawn up by the Commission of 1862?—I have a copy of it.

5088. Have you read it?—Yes.

5089. Have you read the instructions upon which that report was based?—I never saw them till to-day, but I have read them.

5090. Do you see in those instructions any reference whatever to the Royal Irish Academy?—No, I do not. It does not appear that it was originally intended that any inquiry should have been conducted into the affairs of the Royal Irish Academy.

5091. But the Royal Irish Academy is referred to in that Report, is not it?—The Royal Irish Academy is referred to at page 33 of this Report.

5092. At page 124 of that Report, is a letter from Captain Donnelly to the Right Honourable C. B. Adderley, in which are these words, "I have the honour to inform you that a Treasury Commission has been appointed to inquire into the Royal Dublin Society, Museum of Irish Industry, Royal Hibernian Academy, Royal Irish Academy, and Committee of Lectures, the Treasury Minute for which I inclose;" is there in the Treasury Minute any reference whatever to the Royal Irish Academy?—No; but I see a reference to the Royal Hibernian Academy, and, very possibly, there may have been a confusion between the two; the Treasury thinking fit to order an inquiry into the affairs of the Royal Hibernian Academy, which is an Academy of Art, confusion perhaps arose, and the name of the Royal Irish Academy was inserted by mistake.

5093. Assuming that to be the case, who was summoned on the part of the Royal Irish Academy to give evidence before that Commission?—No person that I am aware of. This report was published before I, or any officer of the Academy knew that an inquiry had been held into the affairs of the Royal Irish Academy.

5094. You never had any communication addressed to you officially as President of the Royal Irish Academy, that this inquiry was about to take place?—Certainly not.

5095. Dr. Haughton was examined with respect to the Royal Irish Academy before the Commission, was he not?—He gave some incidental evidence with respect to the affairs of the Royal Irish Academy; but he was principally examined with reference to the Royal Dublin Society.

5096. Would the Royal Irish Academy have accepted that evidence of Dr. Haughton, as representing the opinions of your body?—I stated on Monday that I did not agree in Dr. Haughton's opinions with respect to the Royal Irish Academy.

5097. Do you consider that Dr. Haughton was authorised in any way to express the opinion of the Royal Irish Academy?—Certainly not.

5098. There was a Commission sitting in Dublin

lin to report on your Academy specially as stated in Captain Donelley's letter, and yet no communication was made to you as president, or to your body, of the sitting of that Commission?—That is quite true.

5099. Do you agree in this passage at page 33: "Some advantage would be gained if all the Parliamentary grants in aid of science and art at Dublin were in like manner included in the estimate of the Royal Dublin Society, and were paid through its medium, inasmuch as they would then be annually brought under consideration in one point of view, and the council of the Royal Dublin Society would have an opportunity of making any representation which the circumstances of the time might render proper in reference to them?—I do not. Immediately after that report was published, I felt so strong an objection to that statement, that without waiting to communicate with the council of the Academy, or with the Academy at large, I conceived that it was my duty as President of the Academy, to write to the Lord Lieutenant of Ireland remonstrating, and saying that I thought such an arrangement as that would give great dissatisfaction, and be inconsistent with the dignity and usefulness of the Royal Irish Academy. That letter of mine was approved of by the Academy at a meeting held very shortly after; and the resolutions which I have here were adopted, protesting against the arrangements recommended in the report of the Commissioners.

5100. Will you read those resolutions?—They are to this effect: I. "That the Royal Irish Academy regards with surprise and alarm the suggestion contained in the Report of the Commissioners of Inquiry respecting scientific instruction in Ireland, that the Academy should be placed under the superintendence, and to some extent under the control, of the Council of the Royal Dublin Society. II. That the Commissioners appointed by the Treasury to inquire into a number of scientific institutions, including this Academy, have made the above recommendation without examining any of its officers, or even notifying their intention of taking evidence affecting its interests. III. That such an arrangement would be incompatible with the dignity of an Academy incorporated as this is by Royal Charter, and would tend to lower it in the estimation of the public; would be destructive of the independence and freedom of action of the gentlemen by whose unpaid agency the work of the Academy is in a great measure performed, and would inevitably lead to misunderstanding and collision between bodies which have always occupied, and ought still to occupy, distinct though equally important spheres of action. In fact, the objections to such an arrangement felt by the members of the Royal Irish Academy are such as would be felt by the members of the Royal Society of London to a proposal to submit them in any degree to the control of the Society of Arts. IV. That the Academy entirely dissents from the opinion expressed in the report of the Commissioners to the effect that real public benefit would ensue from affiliation of this Academy to any other society. V. That the only other reason assigned by the Commissioners for an innovation which would thus compromise the honor and interests of an important national institution is an alleged official convenience of the most inconsiderable kind. VI. That the Academy, for the foregoing reasons, protests against the proposed change. VII. That copies of the foregoing resolutions be forwarded to his Excellency the Lord Lieutenant, to the Lords of the Treasury, to the Committee of Council for the department of Science and Art, and to all the Irish Members of both Houses of Parliament.

5101. You altogether repudiate the proposition in the strongest manner that the Council of the Royal Dublin Society should have any opportunity of making any representation upon your society?—Yes, we thought it would place us in a condition of subordination to the Royal Dublin Society. It would not only be competent for them to report upon our operations, but they would have been charged with the duty of so reporting.

5102. You think that if such a recommendation as that were carried out there would be an opening for perpetual and mischievous interference?—I may say that the Academy was unanimously of that opinion.

5103. Do you agree also in this portion of the report, "The long-established and comprehensive character of the Royal Dublin Society has already made it to some extent a point of union for the other local institutions for the cultivation of science and art; and when its constitution shall have been strengthened, and its means of instruction enlarged in the manner we have recommended, this tendency to approximate, is likely to be increased." Do you think the Royal Dublin Society is at this moment a point of union for the other local institutions for the cultivation of science and art?—Certainly not in the sense indicated in that report. There are a great number of other institutions, scientific and literary, which are independent.

5104. The next passage is this. "Real public benefit would ensue from voluntary affiliation of this kind, even if it did not go beyond a general recognition of the precedence due to the Royal Dublin Society." Do you recognize on the part of your Academy that any precedence is due to the Royal Dublin Society?—Yes, such precedence as is due to it on account of its being an older chartered body, but not precedence in intellectual rank. We claim for the Royal Irish Academy a higher scientific rank. We claim for the Academy the same position in the list of scientific societies in Ireland that is occupied by the Royal Society of London, as compared with other learned societies in England.

5105. You look upon the Royal Irish Academy as containing the *elité* of Irish science?—We do not recognize in that sense the precedence of the Royal Dublin Society, or any other Irish society.

5106. Apart from the fact of your not having been requested to attend before the Commission, do you consider that the Commission, from its composition, was a proper commission to give a perfectly impartial decision upon matters affecting the scientific institutions of Dublin?—I feel some hesitation in expressing an opinion which bears upon the fitness of individuals, for some of whom I entertain the highest possible respect, and who are my personal friends; but I might say certainly, if it was desired to constitute a commission which should secure public respect and confidence, and to which duties of the kind they had to perform should be entrusted, it ought to have comprised persons acquainted with the affairs of the Royal Irish Academy, and other scientific and literary institutions. They were not represented in any way upon that Commission.

5107. Or it should have been composed of

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members who, from their position, might be supposed to be perfectly impartial?—Certainly.

5108. Are you aware that a short time ago there was a Commission appointed to inquire into the Royal Academy in this country?—I remember reading in the newspapers a statement about the appointment of that Commission.

5109. If half of that Commission had been composed of members of the Royal Academy it would have been pretty much the same thing as the composition of this Commmission; would it not?—Yes, it would.

5110. Are you aware that no member of the Royal Academy was upon that Commission?—I remember seeing the names of the Commissioners; they were persons holding an independent position, and highly competent to conduct the inquiry, from their knowledge and character.

5111. Entertaining that respect, which every person must entertain, for two such eminent persons as the Lord Justice of Appeal and Sir Richard Griffith, do you not think that where the status and position, and the emoluments of the Royal Dublin Society, were likely to be affected by this Report, it would have been better, upon the whole, if two other names had been substituted for those two persons, who were actually connected with that Institution?—I should at all events go so far as to say that it would have been desirable that other names should have been added of persons completely independent. Those are both men possessing great knowledge of persons and things in Ireland, and their knowledge might have been made very available, notwithstanding the fact of their being interested in the welfare of the Royal Dublin Society.

5112. I am speaking perfectly abstractedly. As far as public opinion goes, do not you think that public opinion would be decidedly in favour of persons being appointed who would be completely impartial upon a matter of this description?—In the abstract, I must admit that the public would perhaps be better satisfied with the judgement of persons who would be quite independent, but I may assert that the intelligence and honesty of those two gentlemen would be disputed by none.

5113. Are you aware that the witnesses examined before that Commission, 17 in number, were 16 of them members and officers of the Royal Dublin Society?—I have not classified the witnesses in that way, but I read the Report pretty carefully, and it appeared to me that all the witnesses were members of the Royal Dublin Society, or officers of it.

5114. Do you think that an examination conducted in such a way as that is likely to give the public an opinion of its impartiality?—I do not think it was a judicious selection of witnesses.

5115. Do you think it would be injurious to the interests of the public, that the Museum of Irish Industry should be suppressed, or that it should be amalgamated with the Royal Dublin Society?—Before I answer that question I should like to say, that my power of giving an opinion upon that point may be perhaps limited by the fact, that I have not ever been a member of the Royal Dublin Society, and I have not, therefore, had a practical acquaintance with its mode of carrying on its work; but having premised that, I am ready to say in reply to the question that I think it would not be expedient as far as I am able to form an opinion to suppress the Museum of Irish Industry, and amalgamate it with the the Royal Dublin Society.

5116. I presume that you are generally acquainted with the working of the Royal Dublin Society, and with the working of the Museum of Irish Industry?—Yes, I have as full an acquaintance with the working of the Royal Dublin Society as an outsider has with any affairs of the kind. My father was a member of the Royal Dublin Society, and took a very active interest in its affairs. I have a great many friends in the Royal Dublin Society, and of course I cannot help looking with interest to matters of so much consequence to the public as the relations between the Royal Dublin Society and the Museum of Irish Industry.

5117. Naturally, as taking an interest in science, you are, I presume, pretty well acquained with the working and functions of the Museum of Irish Industry, are you not?— Yes, I have a pretty accurate knowledge of the way in which its work is done.

5118. Do you believe that whether the Museum of Irish Industry be placed on the same footing as that at Jermyn-street, or whether its functions be extended, it might be made an independent institution of great utility to Ireland?—Yes.

5119. Would you limit the industrial instruction given in Ireland merely to mining and agriculture?—I should be sorry to see it so limited because I think it is to be hoped that industry of various kinds will receive a great development in Ireland; I think it a mistake to suppose that our industry, even at present, is limited to mining and agriculture; there has been a considerable development of manufacturing industry in Ireland in different departments, not to speak of the flax manufacture in the north of Ireland, there are other branches of industry which are not inconsiderable; and I think, looking even at the present, to say nothing of hopes for the future, it would be very desirable indeed that something in the nature of an industrial college should be established having the power of conveying instruction in other subjects besides agriculture and mining.

5120. Do I gather rightly from your answer that you would advocate the extension of scientific instruction to what I may call the middle classes in Ireland?—Yes, I think it would be very beneficial indeed to the country.

5121. As they have already general education given to them through the means of the Queen's colleges, there would be nothing anomalous, would there, in giving to the same classes scientific education?—I think not; I think political economists have been rather mistaken in their view of withholding education of that kind from the middle class, and in saying that they ought to be left to procure it at their own expense.

5122. Do you think that providing such education by the State would in any way interfere with what is called private enterprise?—I think not. There is very little private enterprise of that kind, and it would be a long time before an industrial school or a college, such as you are speaking of, would interfere with private teachers.

5123. The fact that such scientific teaching was given with the stamp of Government authority would naturally cause it to be more esteemed in the country, would it not?—I think a Government establishment of the kind ought to be managed by persons of a very superior order, who would give a kind of instruction which could not be expected from ordinary private teachers, and that such instruction would command respect and have authority.

5124. Do you agree in the correctness of this description

description of the museum of Irish Industry, that it is a public institution, supported wholly by public funds, solely for the use of the public, directed by a permanent scientific head, immediately responsible to Government, and administered exclusively by scientific men selected on grounds of fitness?—That seems to me to represent the facts.

5125. As to the Royal Dublin Society, do you agree in this description of it; it is composed of a number of subscribing members, and is consequently a private body, the members of which must necessarily have some preferential privileges to the possible detriment of the public. It is directed by a council, whose members are fluctuating, and have no individual responsibility, and it is administered by committees of the same nature as the council; do you consider that is a fair and proper description of the constitution of the Royal Dublin Society?—Yes; I believe that truly represents its nature.

5126. Are you of opinion that the transfer of educational functions from the Government to a body of gentlemen, like the Royal Dublin Society, would be such a reversal of the policy of the day, as if the functions of the National Education Board were given back again to the Kildare-place Society?—I think there is an analogy between the two cases. They are both cases where educational functions are undertaken by individuals or a society who are not strictly responsible; in that consists the analogy.

5127. Sir *Edward Grogan.*] Is that the only analogy, in your opinion?—That is the leading analogy, that it is a case of committing instructional functions to persons who are not directly responsible to the Government. I would also notice that it includes the notion of committing instructional functions to a body in the nature of a committee.

5128. Have you ever found any difficulty in obtaining competent persons for your own committees?—Our council, as I stated on Monday, consists of 21 persons, divided into three committees. In the department of science, we never have had any difficulty in filling our list with highly competent persons; but in the departments of polite literature and antiquities we do not always find it so easy to obtain men of learning, who could afford to give the time necessary to enable them to transact the business efficiently.

5129. *Chairman.*] You have been connected, have you not, with the Endowed Schools Commission?—Yes; I was a member of the Commission of Inquiry into the Endowed Schools in Ireland.

5130. What opinion have you of the conduct of such schools by amateur bodies as a general rule; are they well conducted?—I joined in a report which expressed very strong opinions against the management of schools by what you, perhaps, correctly call amateur committees; that is to say, committees consisting, for the most part, of very distinguished persons, persons holding high positions in society, having official functions, bishops, judges, and so on. It is obvious that where committees are formed of a large number of such persons; many of them can rarely, if ever, attend; they can have no continuous and familiar acquaintance with the business that is to be transacted; they must attend irregularly, and the effect of that is certainly injurious. Then, again, as the number of members of these committees is generally large, there is a want of definite responsibility fixed upon the persons who have the power in their hands. After an experience reaching over the whole of the country, the conclusion to which I came was, that committees of this kind did not, in general, work efficiently; that it was often difficult even to obtain a quorum for the transaction of business.

5131. The attendance is irregular and the responsibility divided?—Yes.

5132. And the result of it is, I presume, that the management of those schools falls into the hands of the secretary, who either becomes the chief manager of the whole affair or else the whole thing becomes a mere matter of routine?—That is, in a rough way, a true statement of the result. You must bear in mind that I am speaking of committees constituted in a particular way, where they have upon them a large number of persons, those persons of high station, with a great many other important functions to attend to, in fact, with whom this work is only to be a kind of by-work and not their regular employment. Whatever they do in it they are to be thanked for doing, and be judged hardly if they attend irregularly, or fail to transact their business with extreme diligence. It is a bad system, attempting to govern educational bodies by committees of volunteers.

5133. You think that any educational establishment supported at the public expense ought not to be placed under the superintendence of a committee of amateurs?—That is my opinion.

5134. Has not the composition of such committees very often a reference to the social status of the individual rather than his qualifications for the work?—Yes, in two ways:—a great many of those committees include in them a number of distinguished persons, who are made *ex officio* members merely because they hold a high official status. And where committees have to be chosen I think it very likely that regard would often be paid to what may be called respectability, and dignified position.

5135. If scientific education was to be entrusted to a private body at all, I dare say you think your own body the Royal Irish Academy would be the most proper body to be entrusted with such education as being composed of the *élite* of the scientific world in Ireland?—I think it is composed of the *élite* of scientific men in Ireland, and our Committee of Science as at present constituted would be perhaps as efficient a Committee in point of ability as could be found to direct a system of public scientific instruction whether abstract or in connection with Art and manufactures; our Committee at present consists of Dr. Salmon, Mr. Jellett, Dr. Haughton, Professor Beete Jukes, Mr. Sullivan, Dr. M'Donnell, and Dr. Smith, the two latter gentlemen representing biological science in that Committee. These are persons of the very highest scientific eminence, and so far as ability goes are perfectly well fitted for such functions as you are speaking of; but I do not think it would be an advantageous thing to appoint such a Committee as that to direct a public system of scientific instruction applied to the arts of the country.

5136. Even with all the advantages of this highly constituted Committee as regards their scientific attainments you are decidedly of opinion that you would not entrust the scientific education of the country to them, provided even that they were willing to accept it?—It being scientific instruction paid for by the State, it would be a much more beneficial thing in such a case to appoint a competent

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competent person who should be paid by, and who should be directly responsible to the State. I think the amateur and volunteer principle is not the right one to apply in cases of this character.

5137. Do you think that there is anything in the circumstances of Ireland, which renders it expedient that the technical and scientific instruction given in that country at the expense of the State, should be entrusted to a body of private gentlemen rather than to a public scientific institution, as is the case in England?—What I have said already amounts to an expression of my opinion against entrusting the scientific education of the country to a body of private gentlemen.

5138. You think that there is nothing peculiar in the state of Ireland to render the transfer of scientific education to such a body expedient?—I do not think there is.

5139. Do you think it advisable that the Royal Dublin Society should be relieved of those educational functions for the management of which it is not specially adapted?—Of course I would say it ought to be relieved of those functions for the performance of which it was not adapted.

5140. I presume that you would say that the Royal Dublin Society is specially adapted for the establishment and maintenance of a Veterinary School, and that an agricultural chemist should also be attached to it, would you think that those two departments might be legitimately comprised in the Royal Dublin Society?—Yes; I have always regarded agriculture as the primary object of the Royal Dublin Society, and, therefore, I should say that the connexion with it of a professorship of that kind would be natural and right. I do not see how that work could be better done or under better superintendence. So also with respect to an agricultural chemist, the society would be able to superintend that kind of work perfectly well.

5141. Are you of this opinion, that the Royal Dublin Society and the Museum of Irish Industry have the same scope, namely, the promotion of industrial education, but that they should carry out those functions in different ways, the Royal Dublin Society, by means of its agricultural exhibitions, its exhibitions of manufactures, its schools of art, its library, its museum, and its Botanical Gardens, and the Museum of Irish Industry, by systematic teaching and special technical instruction?—Looking at it from without, I think such a distribution of work would be for the benefit of both Institutions. I think at present the Royal Dublin Society aims at too much. It has done a great deal; it has gained a great deal of reputation by its labours in different departments, but I think of late we have seen that its field of labour has been extended to such a degree as to render it scarcely possible for it to cultivate the whole of that field with equal success. It is to that, I think, we must ascribe the fact that other societies have been, as it were, detaching themselves from it, and taking separate existence. If the Royal Dublin Society's labour was confined to the departments you have spoken of, it would have as much to do as I think it would be possible for the society to do well, and it would not in any way diminish its dignity if it handed over the purely educational department to the Museum of Irish Industry.

5142. You do not think it would lose anything either in dignity or utility if it were freed from duties for the discharge of which it is not specially adapted?—I do not think it would.

5143. Mr. *George.*] Do you mean to express an opinion yourself that the Royal Dublin Society is not specially adapted to perform educational functions?—I do not think it is specially adapted to perform educational functions; it is specially adapted to the performance of other functions.

5144. *Chairman.*] Do you approve of the system of provincial lectures?—I think in the present condition of Ireland it would be inexpedient to discontinue all provincial lectures.

5145. You would continue them for the present?—I would continue them for the present.

5146. Do you think they prepare the way for the general introduction throughout Ireland of science schools?—I do; I think there are many places in Ireland where we could not at all, in the present state of education, expect to have scientific schools set up, unless such a stimulus was given by lectures conveying to the population in those places an idea of the importance of scientific instruction.

5147. You think that they would prepare the way for the introduction of science schools; do you think the Museum of Irish Industry would be the means of furnishing competent masters for such schools?—It ought to be. I assume that those scientific schools throughout the country would be very subordinate institutions, in which no attempt would be made to impart instruction of that high class that would be given in the central school in Dublin; and if the instruction in the central school was of that high class, of course the Museum of Irish Industry would furnish instructors able to carry on the work of science schools; but I doubt whether, for a long time, there would be remuneration for teachers of science schools depending upon those schools solely for their livelihood.

5148. The mere payment from the results would not be sufficient?—I speak with hesitation, because, of course, my knowledge of the circumstances of country towns must be limited, but I think there are not many country towns where it would be possible to work science schools upon the system of payment by results.

5149. Do you think it would be possible to obtain, with the prospects of payment by means of results alone, persons who would devote a sufficient amount of their time to become teachers under the science system?—I do not.

5150. With regard to lectures in general, are you of opinion that lectures ought to be free, or that they ought to be accompanied with a slight fee?—I think that courses of systematic lectures ought to be accompanied by a fee—a moderate one, so that they should be quite within the reach of persons of the middle and humbler classes. A few popular lectures, to which admission is gratuitous (I do not think there need be any very great number) tend to inspire a taste for scientific instruction, and then those who are in earnest, and wish to obtain solid acquirements, will enter upon the course of systematic instruction, and again if they are in earnest they will be willing to pay something for it.

5151. You do not object, I presume, to the delivery of courses of popular lectures, so long as the professors give those lectures as their own voluntary act?—I have not distinctly contemplated that part of the arrangement; but I may mention that in our university professors occasionally commence a course with a prelection, which

which is open to the public; in which a general view of the nature of the instruction to be given in the systematic course is set out; then follows the systematic instruction. I think the same system is in existence in Dublin; that is to say, the popular lectures given in the Royal Dublin Society have been intended to be the prelude to the systematic courses given in the Museum of Irish Industry.

5152. Are you of opinion that all systematic instruction followed by examination and prizes, or certificates of competency, should be given under the direction and control of one officer responsible to Government for the efficiency of the system, under similar arrangements to those which exist at the present moment in Jermyn-street?—I would rather not answer a question so very definite as that; for instance, that the instruction should be "under one officer," or that the arrangements should be exactly similar to those existing in Jermyn-street, with which I am not perfectly acquainted; as to those points I may make some reserve; but generally I think that the system of examination, and so forth, should be under a Government officer, or officers paid by Government, and directly responsible to the Government.

5153. Sir *Edward Grogan.*] I think you stated that you were not a member of the Royal Dublin Society?—I am not.

5154. Are you aware of the details of the management, or how the work is done in the Royal Dublin Society?—I think I could answer most ordinary questions you would put to me with respect to the mode in which the business is done.

5155. Do you know generally who compose the Committees who superintend the different branches of the works?—I have read over their names, and I know that they are active, intelligent, well informed gentlemen.

5156. They are well informed upon the subjects which they were appointed to superintend?—Yes, I should say so; I believe the committees are as well selected as they could be.

5157. Would you say that the gentlemen who sit on these committees are, in those respective walks of science, as eminent as any gentleman to be found elsewhere?—I would hardly go so far as that, because, to say that the 88 persons forming those committees were all of such eminence as that would be a little too strong; but, I believe, they are respectable and efficient committees.

5158. Would you say that half the number were as efficient in the several branches of science to which they devote themselves as any gentleman to be found elsewhere?—Yes; I should say so.

5159. You are, of course, aware that there have been lectures habitually delivered under the superintendence and control of those different committees in the premises of the Royal Dublin Society?—I am.

5160. Have you ever attended any of those lectures yourself?—I have.

5161. Did you consider the lectures so delivered were good, and well calculated to afford instruction to the public?—Yes; I thought the lectures I attended were good. I have not attended many lately. I do not think I have attended any since the constitution of the present lecture committee, but as a boy (when, perhaps, I was not a good judge of a lecture) I used to attend the popular lectures in the Royal Dublin Society with a great deal of pleasure.

5162. And profit also?—And profit also, I am sure; giving me an impulse in certain studies.

5163. Does your recollection enable you to say whether the theatre on those occasions was well attended or not?—Some lectures were very well attended indeed. I remember, for instance, the lectures given by Sir Charles Giesecke, 30 years ago, upon the subject of Greenland, were attended so numerously that the lecture-room was always crowded to excess.

5164. He was professor of mineralogy, was he not?—Yes.

5165. Those lectures were so extremely popular that his course of lectures were peculiarly well attended?—They were. They were of a popular character, describing the habits and customs of the Greenlanders, and giving an account of his own residence among them.

5166. It has been stated in evidence that the students of Trinity College occasionally attend the lectures delivered in the theatre of the Royal Dublin Society, because they find they get more practical instruction there in mineralogy and metallurgy, and kindred branches; is that within your knowledge?—It is not within my knowledge; but it is quite possible that there may be a particular department of instruction in which one school would have an advantage over the other; but I should doubt whether, on the whole, our students would not get as good instruction in Trinity College. If they learnt better at the Royal Dublin Society what they had to learn with respect to the smelting of metals, perhaps they would learn some other branches better in Trinity College.

5167. I do not put the two institutions in competition one with the other, but I merely mention that it has been proved that the students of Trinity College frequent the lectures given in the Royal Dublin Society. Of course they would attend them for the purpose of assisting their studies; if they so attended them, it cannot be said, can it, that those lectures were altogether useless, or inapposite in the way of education?—Certainly not. I have always heard that the lectures, generally speaking, are efficient, and as well attended as could be expected.

5168. Have any instances ever come under your knowledge of gentlemen having been first stimulated to enter upon scientific pursuits from those lectures?—I cannot say that any such instances have come under my own knowledge.

5169. Are you well acquainted with the arrangements connected with the Museum of Irish Industry?—Yes, tolerably well. I have read what is contained in this report, which gives an account of the working of it; and I have visited the institution myself, and have attended some lectures delivered there. I have attended lectures given by Professor Jukes on physical geography.

5170. Of much the same character, I presume, as those given in the other institution?—Yes; but I doubt whether there is any other person in Dublin who would lecture upon physical geography so well as Professor Jukes.

5171. Did you ever attend any of the lectures delivered in the theatre of the society on mineralogy, by Sir Richard Griffith, when he was professor?—No.

5172. Did the fact ever reach your knowledge that some of the most extensive and successful mining enterprises in Ireland originated from his lectures?

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ectures?—It never came under my knowledge, but I am quite prepared to believe it.

5173. If it be the fact that the students of Trinity College occasionally attend the lectures in the theatre of the Royal Dublin Society, for the purpose of assisting them in their own studies, and helping them forward in the course they have to follow in Trinity College, have you any doubt of the capability of the Royal Dublin Society to give education?—I do not doubt that the Royal Dublin Society has been an agency very useful indeed, in imparting education and superintending lectures. The only question I would raise is whether the society is the best kind of organization for superintending a system of the kind. I have expressed my opinion (let it go for what it is worth), as being unfavorable, on the whole, and in the long-run, to that kind of agency.

5174. You have no doubt yourself that they have done good and are capable of doing good?—I have no doubt at all of it, as I am sure that voluntary agency in all departments of education has done a great deal of good; and yet that voluntary agency might be greatly improved by bringing it under control, systematising it, and giving it those advantages which a State system of instruction can alone command.

5175. The Chairman asked you whether in your opinion the Royal Dublin Society was specially adapted for educational functions in Ireland, and you said that you did not think it was?—I did.

5176. Did you mean your answer to convey not that it is not capable of giving scientific instruction, but that in your opinion there might be better machinery?—Yes; I think it has been an instrument of diffusing a great deal of excellent instruction, but I think it is not the best machinery that could be devised for administering the Government money in the working of a national system of instruction.

5177. You come to that conclusion on general principles?—Yes.

5178. Not from any special knowledge of the two institutions?—I cannot say not from any special knowledge of the two institutions, because I have endeavoured to inform myself as to their working; but it is mainly because I think an institution like the Royal Dublin Society is not a good organization or mechanism for such a purpose; it is rather for that reason than because I think there has been any want of skill or energy or public spirit on the part of the members of the Royal Dublin Society that I have expressed the opinion I entertain.

5179. Is not the success of scientific education in any branch dependent mainly upon the ability and the conscientiousness of the professor who teaches it?—Yes, mainly so; but that professor must work under superintendence in general.

5180. You have already stated that as far as your knowledge goes the moiety of the gentlemen who compose the several committees superintending the Departments of the Royal Dublin Society hold as high a position in their several walks of science as any other men who could be found?—Yes.

5181. If the professors individually be of equal merit and of equal conscientiousness in the discharge of their duty, ought not this education to be the same?—There would be just the same difference between that system and the system that I recommend as there is between an army of volunteers who are not officered by military men and an army of regulars.

5182. You would prefer that the system should be under central control?—I would; I think that the vigour of the work, and the honesty with which it is done, is insured very much by that kind of government.

5183. You are in favour of centralizing in that respect?—I am.

5184. Does it not occur to you that the very fact of the class of gentlemen to whom we have alluded, going so earnestly and heartily into this work, shows their sense of the value of the work they are engaged upon?—Certainly. When those gentlemen commenced this work it had to be done through them or not done at all; they threw themselves into the work; they were men of intelligence and public spirit, and they took it up with vigour; and I could imagine, even though they were almost half persuaded that it would be better to originate another instrumentality, yet they would feel an unwillingness to part with functions in which they had taken a great interest, and which were honourable to them.

5185. Does not such an organization as that of the Royal Dublin Society tend to bring such agency to bear upon the promotion of the progress of science and literature that no Government aid or money can command?—Yes; I think unless there be some amount of voluntary agency, institutions will languish; but I still think that voluntary agency, without control, and subordination, and definite responsibility, will not produce the best results.

5186. How can there be any responsibility more stringent, more important, or more valuable than that of the conscientious discharge of duty undertaken; will any Government rules equal that?—It is the highest possible motive; but you have to take men as you find them; and if gentlemen have a great many other things to do, if they are, as the Chairman described them, merely amateur committees, it is not possible to expect from them that continuous systematic devotion to public duty which can be given by a person whose business it is, and who has no other business to interfere with it.

5187. As far as you know, has any default, or neglect, or inattention occurred on the part of the gentlemen connected with those committees of the Royal Dublin Society?—No.

5188. Then, why should we assume that any other engagements have interfered, or would be likely to interfere, with the proper discharge of their duties?—I never said that any engagement had interfered with the discharge of their duties; I do not impute any neglect of their duties to any of those gentlemen; but, from the nature of the case, you have more reason, in the long-run, to expect a continuous systematic attention to public duties from persons paid for doing them, and who have not any other regular avocations.

5189. I understand you to make that observation on general principles only?—Quite so.

5190. You recognise the full value of individual exertion in the promotion of education in any branch of science?—I do.

5191. Is there anything of that kind connected with the Museum of Irish Industry?—I think there always is in any healthful educational institution, a vast amount of voluntary action. A school will always be a bad school no matter what is taught in it, unless the teachers are teaching from a high sense of duty, and from feeling a great

great interest in the subject in which they are employed to give instruction; I think in every good school there is a vast amount of voluntary agency, no matter what may be the organization of the school, and whether the teachers are paid or not.

5192. But, admitting the mental qualifications, and the power of teaching in the professors, and the conscientiousness of the professors in the discharge of their duties, to be equal, is there not wanting in the Museum of Irish Industry, that independent and voluntary exertion, the value of which you willingly recognise?—I do not know that there is; I have never heard that there was any want of activity and life in the Jermyn-street institution, for instance.

5193. I am not saying that there is; I only ask you if that private and amateur sympathy and exertion which prevails in the Royal Dublin Society, exists in any shape whatever in the Museum of Irish Industry?—The amateur element does not enter into it at all.

5194. When the word "amateur" was used by the Chairman, and, I might say, adopted by you, did I understand you to attach to that word the meaning of want of thorough mastery of the subject, or want of competency?—Not at all.

5195. You only meant voluntary exertion?—Yes, that the person feels that he is free to work or not to work, that it is according to his pleasure or convenience.

5196. You did not mean to disparage in the slightest way, either the ability or the knowledge of the individuals in that position?—Not at all.

5197. We have the fact that a large body of the gentlemen constituting the committees of the Royal Dublin Society are amateurs in the sense in which you use the term, and that their scientific qualifications fitting them to discharge the duties which they undertake are undisputed; agreeing upon that, do we also agree upon this, that the lectures given under their superintendence, and the lecturers appointed by the society to give those lectures, are in themselves unexceptionally excellent?—As far as I have an opportunity of judging, the lectures have been efficient.

5198. You were asked by the Chairman whether there was anything in the special circumstances of Ireland which should prevent scientific education being given in that country in the same manner as it is given in England, and you said that you thought it ought to be given in the same way as in England, in the present state of Ireland. What is the scientific education to which you referred as being given in this country?—The education to which I referred was the lecturing and teaching in Jermyn-street.

5199. That is a Government establishment, maintained by Government funds for the special purpose of giving education in mining, is it not?—It was established mainly for that purpose; but the collections seem to indicate a wider range. The collections show that instruction is given with reference to everything that can be done with the products of the earth in connexion with manufacturing industry. Mining does not by any means convey to an ordinary person the idea of what is done in that school.

5200. The institution at Jermyn-street embraces mining and its kindred sciences, does it not?—I believe what I have stated is true. The instruction given there is brought to bear upon the applications of science to all departments of industry in which the materials are taken from the earth.

5201. Is it brought to bear upon manufacturing industry in any way?—Yes; the lectures given there give information as to the smelting of metals and chemical analysis. Instruction is given in dyeing, for instance. Every material whatever, obtained from the earth, made available for the purposes of manufacture, may become a subject lectured upon, and with respect to which instruction is given at Jermyn-street, as I under stand.

5202. Is any instruction given there in manufacturing industry, for instance, the cotton manufacture, or the porcelain manufacture?—The instruction at Jermyn-street does not embrace textile fabrics, but it embraces the ceramic manufacture.

5203. Would it be your idea that an institution analogous in all respects to that at Jermyn-street, ought to be established in Ireland, I mean for instruction in the same subject, and given to the same class of the public?—I think it would be desirable, but I should like to see an acknowledgment that its field was to be more extensive; that it was to include such manufactures as flax, for instance. I should like to see an industrial school established in Ireland like that in Jermyn-street, but with a rather more extended field.

5204. What reason have you to think, seeing that the Government consider it desirable rather to restrict than extend the present operations of the establishment in Jermyn-street, that they would be likely to extend them in Ireland?—Because I think they can trust to the manufacturing energy and skill of English manufacturers a great deal better than they can to the skill and enterprise of Irish manufacturers. In Ireland manufacture has not developed itself to the same extent. Take the case of chemistry in connexion with manufactures. Some time ago I went over the glass works of Mr. Chance at Birmingham. I found that he had a most accomplished French chemist employed there, doing nothing but attending to the chemistry of the manufacture, and he paid him a salary of 500*l.* a-year. Such manufacturers as Mr. Chance, thoroughly understand their own interests, and they have capital, enabling them to work out their business in a systematic and complete way; but we are as yet rather behind that in Ireland; and it would be good policy on the part of the State to furnish scientific instruction of this kind, and to afford facilities to those who are in search of it, and willing to turn it to account.

5205. Is it within your knowledge how long that French gentleman had been employed in those works?—No, it is not; but I know it must have been several years. He was employed upon those works at the time of the meeting of the British Association in Birmingham, I should think 16 or 18 years ago.

5206. When you say that you would extend the sphere of scientific instruction in the Museum of Irish Industry a little beyond what you believe to be the functions of the institution at Jermyn-street, do I rightly understand that the illustration you have just given of education in chemical science would meet your idea?—I think such chemical instruction as that is already given in Jermyn-street, but the Government feel that there is little occasion for them to extend their operations in that respect, because the English

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manufacturers are so intelligent and enterprising as to render it to a great extent unnecessary.

5207. Do you wish that that same system should be established on somewhat a wider range in Ireland?—Yes. As for instance, I would give scientific instruction bearing upon textile fabrics, which would not be treated of in Jermyn-street.

5208. Do you mean the manufacture of textile fabrics, or the chemical treatment of them?—Not only the chemical treatment, but the manufacture. For instance, the preparation of flax.

5209. Does not that more specially come under agriculture?—Those things run into one another, no doubt; but the preparation of flax, enabling flax to be spun like cotton, would be a subject of immense importance, and which, I think, might be very well treated of in such an institution as I have been describing.

5210. Would not such a subject come under the agricultural department of the Royal Dublin Society, which you think ought to be entrusted to them?—What I said with respect to the Royal Dublin Society is this; I think there ought to be an agricultural chemist attached to it; but those are matters of detail. I adhere to the view which I expressed just now, that, generally speaking, I would not desire to see a society of that kind entrusted with purely educational functions.

5211. In regard to this particular instance of flax, do you consider that scientific instruction, with regard to the raising of flax, or its treatment (before it is dyed or woven) would more properly come under the superintendence of the agricultural department of the Royal Dublin Society, or the Museum of Irish Industry?—Up to a certain stage it comes entirely under the head of agricultural instruction; where it begins to pass under the other head I am not prepared to say.

5212. When it comes to the process of dyeing, you think it comes under the other head?—The nature of the machinery to be used in preparing it for spinning is a question that might be treated of in an Industrial School.

5213. Is there any other matter to which you would apply your remarks besides flax?—I do not, at this moment, think of any other.

5214. Allusion was made to the Endowed Schools Commission, in which you took an active part; is your objection to the constitution of the governing body of those schools of the same general nature as you have described just now. You think that amateur gentlemen conducting that work, and having other engagements to attend to, would not perform the work as well as a centralized body?—Yes. That very often a single member of one of those committees would have done better than the whole committee together, provided it had been his business to do it, and he had fixed upon his shoulders the responsibility of attending to it. The objection I made was not made to the members of the committees individually, but to entrusting a body upon whom the responsibility was not fixed with the transaction of the business.

5215. Does your remark exclusively apply to the case where the Government furnished the funds?—No; there were other cases where there were large endowments.

5216. Private funds?—Yes; as for instance, the schools founded by Erasmus Smith. There was a large endowment there, amounting to 6,000 *l.* or 7,000 *l.* a-year; and there was a numerous committee appointed to administer that fund, and it did not appear to me that that committee worked well, at the same time that the members of it were honourable and intelligent gentlemen.

5217. In regard to that particular, do not you think Erasmus Smith, when he gave his fortune to endow that institution, considered maturely how the fund was to be administered?—He did the best he could do at the time; that was the fashion of endowments in his day; and now the experience of hundreds of years has shown that it is a bad fashion. If anything has been proved, it is what I say, that committees of that kind are bad working bodies.

5218. Do not you think it would be an objectionable interference on the part of the State, and likely to prevent the recurrence of endowments of that kind, if the manner in which individuals choose to establish institutions of that kind, was to be set aside?—I am decidedly in favour of respecting private endowments. I would make a great difference between private and public matters.

5219. You think that the State ought to have a controlling power in establishments founded by the State?—Yes.

5220. But within private establishments the will of the founder should be observed?—Yes, always, however, with certain exceptions. There are cases where the Court of Chancery and Board of Charity Commissioners find themselves obliged to interfere with the intentions of founders. Experience in the course of time proves that it is necessary, and such interference is now tolerated in England to a considerable extent.

5221. The recommendation of the commissioners to whom you referred was in those terms, was it not, that there should be no interference with private endowments?—In the report to which I put my name, I advised that there should be no interference with private endowments.

5222. Your attention has been called to a passage in the report, which speaks of the position of the Royal Dublin Society in relation to other scientific societies. "The long established and comprehensive character of the Royal Dublin Society has already made it to some extent a point of union for the other local institutions for the cultivation of science and art." Do you read that as meaning all the Scientific Institutions of Dublin?—All the Scientific Institutions of Dublin that have Parliamentary grants.

5223. Do you read it in that sense?—At the bottom of page 33, are these words: "Some advantage would be gained if all the Parliamentary grants in aid of science and art at Dublin were in like manner included in the estimate of the Royal Dublin Society." And higher up in the same page you see these words: "The other institutions at Dublin which receive grants in aid of Science and Art are the Royal Irish Academy, &c." Therefore the Royal Irish Academy would come under that head.

5224. With respect to the passage you first referred to: "Some advantage would be gained if all the Parliamentary grants in aid of science and art at Dublin were in like manner included in the estimate of the Royal Dublin Society." Can there be any doubt that that recommendation is with a view to facilitate the administrative arrangements of the department here as regards the distribution of the grants?—That may be so, but it is quite clear from what follows that the Council of the Royal Dublin Society would not only have the opportunity given them, but they would

would have the duty thrown upon them of making representations with respect to those other institutions which drew their funds through the medium of the Royal Dublin Society.

5225. Is it not your impression that that passage was inserted in that report, possibly with a view of suggesting the imposition of that duty upon the Royal Dublin Society, as simplifying the administrative arrangements as regards the grants?—My view of the reason why this was inserted here, is this: I think the object was to make the Royal Dublin Society the great centre of all scientific action in Dublin, and it was contemplated to reform its constitution, to make its Council a more efficient and dignified body with a view to giving it this very power of controlling to some extent the other scientific institutions of Dublin. The next sentence goes on, "Beyond this, we cannot advise that the Royal Dublin Society should be vested with any control over the proceedings of the other societies." By which the Commissioners admit that giving them that, would have been entrusting them with control.

5226. You object to that?—Yes.

5227. Is it within your knowledge that the Royal Dublin Society never sought or desired any such control?—Every member of the Royal Dublin Society with whom I have spoken has expressed an unwillingness to interfere with the Royal Irish Academy, and has disclaimed the idea of seeking any control over it.

5228. Is it within your knowledge that several scientific societies in Dublin have voluntarily affiliated themselves, and are at this moment to a great extent affiliated with the Royal Dublin Society, the lectures of the one body being given in the room of the other body, and there being a general mixture of the members of the respective societies?—I was aware that there was an affiliation of that general kind, but I do not quite understand its nature beyond the fact of their meeting in the Dublin Society House. I do not know the nature of the relations between the affiliated societies.

5229. Affiliation is perhaps too strong a term to express the nature of the connexion between them, but is there not an intimate connexion between them, at this moment, a number of societies centering round one general body?—Yes, to a certain extent; whilst, on the other hand, there has been an exactly contrary operation going forward. Though the Dublin Society was founded for the express purpose of promoting agriculture, yet you have in Ireland the Royal Agricultural Society, though Botany was one of its primary objects, and though it has an excellent botanic garden, there is a Botanical Society, though it embraced natural history, the Zoological Society has been founded, and so forth. Several of those societies are perfectly independent of the Dublin Society, and cannot be said to be affiliated to it in any way. I do not mention this as a reproach to the society, but I only notice it as a fact that there are these other societies established for the purpose of promoting objects precisely similar to those for the advancement of which the Royal Dublin Society was incorporated, and that they have set themselves up independently; I believe the reason of that is, that there is in people in general, scientific people as well as others, a desire of independence; they would rather have a society of their own than be a part of some previously existing institution. We suffer from that feeling very much in the Royal Irish Academy. We have suffered a diminution in the supply of papers in consequence of the setting up of those independent scientific societies; but it is one of those phenomena that we see upon a very large scale in London. London is full of scientific societies, having special objects; that is no reproach to the Royal Society, which originally included in one sphere various separate agencies.

5230. Have not those separate bodies to which you refer as existing in this country sprung into existence from the desire of the members to study with greater minuteness and attention the particular branch of science to which they have directed their attention, than they could have done in the original society?—I do not think that that explanation accounts for the formation of the societies.

5231. Does not it in part account for it?—It may in part account for it, but I do not think it completely accounts for the origin of those independent societies.

5232. Do you think that the other motive to which you refer, namely, their desire to be thoroughly independent induced them to separate themselves from the original society?—In many instances.

5233. Were the objects of the two bodies identical?—Yes.

5234. I believe you are a member of the Royal Agricultural Society of Ireland?—I am not.

5235. Are you aware that the Royal Agricultural Society of Ireland never has any shows in Dublin, that its operations are in quite a different channel to those of the Royal Dublin Society?—I do not know how they divide the field of agriculture between them; I thought it appeared rather a remarkable fact, that a great society like the Royal Agricultural Society should grow up in Ireland alongside of the Royal Dublin Society, which includes in its list of members persons of distinction in every part of Ireland.

5236. Are not you aware that while the Royal Dublin Society have not the means of holding their shows in the provinces, the Royal Agricultural Society has devoted itself to those provincial exhibitions?—I was not acquainted with the circumstances of difference between the two.

5237. The agricultural operations of the Royal Dublin Society are confined to the metropolis, that is to say, their exhibitions are held in the metropolis, though gentlemen who choose to compete live in all parts of Ireland?—Yes.

5238. It would not be easy for the Royal Dublin Society to hold exhibitions in the provinces in the way that the Royal Agricultural Society does?—The question is, whether they could not use the same agency as the Royal Agricultural Society does for getting up the provincial shows.

5239. Has the Agricultural Society any establishment in Dublin where their shows could be held?—Not that I know of.

5240. The Royal Dublin Society has?—Yes.

5241. If, therefore, the Royal Agricultural Society devotes its attention exclusively to country districts and leaves the metropolitan agricultural shows exclusively under the control of the Royal Dublin Society, does not that explain to you the co-existence of the two societies?—Yes, it does to a certain extent; the division of labour may be convenient.

5242. With regard to the Members who formed

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the Treasury Commission of 1862, you know the names of the gentlemen; you, doubtless, know their character also?—Yes.

5243. Have you the slightest idea, though some of them were members of the Royal Dublin Society, that they would be influenced in their judgment by any fact of that kind; can you imagine that the circumstance of their connexion with the Royal Dublin Society would in the slightest degree bias their judgment?—I would not say that any one of us is so completely secure against being biassed as all that.

5244. In answer to a question I put to you, you stated that the increased yearly grant of 200 *l.*, which you asked for, does not at all cover the whole of the wants which the Academy feels?—By no means.

5245. Is there not a most pinching economy in the management of the Academy obliged to be observed to eke out the Government grant and your own subscriptions, so as to carry out the objects you have in view?—Yes.

5246. Is it equal to the legitimate objects you have to fulfil?—It is not.

5247. Therefore, independently of the 200 *l.* a year, an additional grant for the specific purpose to which you have referred there may be other wants, equally pressing and equally urgent, which your Academy would wish to meet?—There certainly are other objects, of which you will hear more from other witnesses.

5248. I understand from you that every access to your library consistent with the safety of the books, is given to visitors?—Yes.

5249. Is there the same facility of access to your museum?—Yes.

5250. How many officers have you to superintend those two departments?—We have only two; a gentleman who acts as assistant librarian, and as assistant secretary, and a servant.

5251. Can either the books or the objects in your museum be properly guarded when the rooms are full of visitors?—They cannot.

5252. You require a considerable addition to your staff for the care of the valuable property entrusted to you?—Yes.

5253. Have the council made any actual estimate as to what addition they think requisite?—No actual estimate.

5254. You have mentioned some extremely ancient books and manuscripts belonging to the library of your society; are there objects in the museum of equal value and interest?—Yes; but I would rather refer you for information upon that head to Sir William Wilde.

5255. Do you consider the collections in the charge of your Academy as national property?—I do myself; I have never heard the question raised in the Academy, but that is my own view. From the time we have been receiving an annual grant, and passing our accounts every month through the audit office, I regard ourselves as being simply trustees for the national benefit.

5256. The members of the Academy individually could not put forward any claim to exclusive property in those objects?—That is partly a legal question whether they could or not; but I do not think they would. I am speaking as a matter of opinion; I do not think it likely that they would.

5257. *Chairman.*] Do you think if the State gave you any increased grant the members of your Academy would be perfectly willing to place the matter in a satisfactory position as regards the State; namely, that all those collections should be considered as thoroughly public property?—I have never heard a word said, or seen any act on the part of any member of the Academy, which lead me to consider the members of the academy as at all jealous of their privileges; but I could not, appearing here as a witness, and speaking therefore only for myself, answer for the Academy at large; but I can express what I believe to be the general feeling of the members of the Academy and the council, that they regard themselves as trustees for, and acting for the benefit of the public.

5258. Sir *Edward Grogan.*] A Committee of this House sat on the Royal Dublin Society in the year 1836, and the first resolution they passed was as follows: "That this Committee is not in a situation to pronounce any opinion upon the legal question, how far the property of the Royal Dublin Society, partly acquired by former Parliamentary grants, and partly out of the funds arising from private subscriptions, be of the nature of public property; but they are of opinion that it is expedient that, in reference to future Parliamentary grants, it should be fully understood that the members composing that society are to be considered as trustees administering a public fund, and not as entitled to an absolute right of proprietorship in the property acquired by means of such Parliamentary grants; and, in reference to the existing property, that a clear and distinct guarantee should be given by the society that the public should be entitled to the full and entire use of that as at present enjoyed." Does that express your idea of the trust nature of the Academy with regard to those objects?—It does.

5259. Would you see any objection to Parliament passing a resolution of an analogous kind with respect to your society?—I can only answer for myself. I should see no objection. On the contrary, I think it quite right that there should be a distinct understanding upon matters of that nature.

5260. Mr. *George.*] Do I understand rightly your objection to the structure of the Commission of 1862 to be, that some of its members were members of the Royal Dublin Society; the Lord Justice of Appeal and Sir Richard Griffiths, for example?—In answer to a question from the Chairman, I expressed an opinion that it is desirable that such a Commission should consist of perfectly independent persons, who are not in any way directly interested in the questions to come before them.

5261. You mean that the Commission should have consisted of persons not members of the Royal Dublin Society?—If the Commission was to consist of a limited number, I think they ought not to have been members of the Royal Dublin Society, or connected with the Museum of Irish Industry, between which, in fact, the question at issue then was; but if there had been members of the Royal Dublin Society upon the Commission, I think that there ought to have been other persons representing other scientific and literary interests.

5262. You are aware that Sir Charles Trevelyan and Captain Donnelly were two members of that Commission, and that they are not either of them members of the Royal Dublin Society?—I believe they are not.

5263. As far as the strict impartiality of the report of the Commission was concerned, it being concurred

concurred in fully by two gentlemen who are not members of the Royal Dublin Society, is it not fair to infer that there was no bias upon the minds of the members of the Royal Dublin Society, which affected the character of their report, the two gentlemen who are not members of the society having heard the entire of the evidence, and having fully concurred in the report?—I should say that there were no persons who were less likely to be led astray by bias than the Lord Justice of Appeal and Sir Richard Griffith; but still people are liable to bias unconsciously in some respects by their situation and relations to other persons and things; and I confess that I thought it was not a satisfactory thing, as regarded the working of that Commission, that a report should have been agreed to (though drawn up by persons for whom I entertain a profound respect, and for whom I have a warm friendship) bearing upon the affairs of the Royal Irish Academy, without any officer of the Academy having been examined.

5264. It is so far as relates to the portion of their report, which is about the Royal Irish Academy, that you object to the fairness, in plain English, of no officer of the Royal Irish Academy having been examined before that Commission?—That is my objection, and I think a very strong one.

5265. You think the Royal Irish Academy, not having been represented on that Commission, and not having been heard before it specially, their report ought not to have made any recommendation with regard to it?—I think it was a miscarriage in the report.

5266. Do you object to the report of those four Commissioners, because it dealt with the Royal Irish Academy, that body not being represented before it, or do you object to the report generally on the ground that the Lord Justice of Appeal and Sir Richard Griffith were members of the Royal Dublin Society, one of the bodies that was to be reported upon?—I entertain objections to various matters in the report; I could not therefore be said to agree in the report generally; and as to the fact of the two Commissioners, whom you have named, being members of the Royal Dublin Society, I think I should be as much disposed to confide in the judgment and impartiality of those two gentlemen as any others in the world. Nevertheless I think they are not incapable of being biassed, having regard to their preconceived notions as members of the Royal Dublin Society.

5267. Are you not aware that a Commission from the Crown or from the Government places those gentlemen in a judicial capacity, and that their report is not a mere expression of their personal opinion, but their judicial opinion after hearing evidence?—I know that that is the theory of Commissions, but, in general, in the construction of Commissions, there is a desire to have a variety of interests represented.

5268. Do you consider seriously that the Lord Justice of Appeal and Sir Richard Griffith would be actuated by any such bias in making a solemn report to Parliament by virtue of a Commission entrusted to them?—Certainly not, consciously influenced. Perhaps I may be allowed to refer to what I said on the occasion of the Report of the Commissioners coming before the Royal Irish Academy. I said, "Three of the Commissioners are gentlemen of whom I have the highest opinion, and whom I am proud to number amongst my friends, namely, the Right Honourable Francis Blackburne, Sir Richard Griffith, and Sir Charles Trevelyan, men of whose ability, integrity, and judgment in general I have the highest possible opinion. They are names to conjure with; but we must never allow ourselves to be carried away altogether by names. It is possible that so wise a man as Francis Blackburne, so intelligent and so distinguished a scientific man as Sir Richard Griffith, and so accomplished an administrator as Sir Charles Trevelyan, may yet fall into mistake in matters concerning societies, with the administration of which they may not happen to possess a very minute acquaintance. And this, I think, is the case in the present instance."

5269. Do you think that four purely scientific Commissioners would have been altogether free from that human infirmity or bias to which you seem to think that even great men like the Lord Justice himself are liable, like other mortals. Might they not have had some bias which might have led them away from the general objects of the Royal Dublin Society to the more purely and strictly scientific objects of another body?—I cannot say that I should expect to find any body who would be utterly without prejudice or bias of one kind or another.

5270. In fact you would like a Commission to represent every interest and everybody?—Yes; and to let one bias balance another.

5271. Do you consider it necessary that the persons to inquire into the constitution and management of scientific bodies should themselves be men fully accomplished in the whole of science?—Not necessarily; but they ought to be persons at all events of a certain amount of knowledge and general information.

5272. Do you not consider that the Lord Justice, Sir Richard Griffith, and Sir Charles Trevelyan, and Captain Donnelly, had quite sufficient knowledge of science to direct their inquiries properly, and come to right conclusions with respect to the government of even scientific bodies?—I would rather be relieved from the necessity of expressing an opinion on that subject.

5273. Perhaps you would rather not express an opinion with regard to the constitution of the present Committee?—It is the same kind of question.

5274. As far as the representative part of that Commission went, Captain Donnelly represented the Science and Art Department, did he not?—Yes, he was officially connected with the Science and Art Department.

5275. And therefore, I suppose, fully competent to represent its interests upon that Commission. Is not the Museum of Irish Industry under the control of Captain Donnelly as in connexion with the Science and Art Department?—It is under the department of which he is an officer.

5276. And Sir Charles Trevelyan represented the Government, who supplied the means of carrying on all those institutions?—I do not deny that it was a good Commission, but it would be a bold thing to say that it could not have been better.

5277. May I ask what commission you would have named?—I would rather decline answering that question. It would be a very hard thing to find any body of human beings who might not be imagined better.

5278. Mr *Waldron.*] Do you mean to convey to the Committee that the witnesses were partial towards the Dublin Society?—No. I merely mentioned

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mentioned that in reading the report I had observed that all the witnesses appeared to be members of the Dublin Society, or officers of it.

5279. But you did not wish us to collect from that that you thought they were partial to the society in the evidence which they gave?—Certainly not.

5280. Are you aware that Commissioners have been sitting for nearly three years on public schools in England?—Yes.

5281. Have you seen their Report?—I have seen it, but I have not studied it carefully.

5282. Will you be so kind as to read the passage which I now hand to you, with respect to the constitution of the governing body of a public school, and inform me if that differs from your opinion with regard to the management of endowed schools?—The passage is as follows, "There are some common features which should generally belong to the governing body of a great public school; such a body should be permanent in itself, being the guardian and trustee of the permanent interests of the school; though not unduly large, it should be protected by its numbers, and by the position and character of its individual members, from the domination of personal or local interests, of personal or professional influences or prejudices, and we should wish to see it include men conversant with the world, with the requirements of active life, and with the progress of literature and science," do you agree with that opinion?—That does not represent exactly what my view is, but I should be very glad to have a committee of that kind superintending an educational institution, provided it was able to secure what I think necessary, that is to say, definite responsibility.

5283. Then, if a body constituted as is recommended in the words which you have read, appointed an individual responsible to them for the performance of certain functions, that would meet your view, would it not?—Do you mean if they appointed a master?

5284. Anybody; say, a master of an endowed school, for instance?—Certainly, I should say that a committee of that kind, a committee of direction and government, controlling and superintending the affairs of a school, is an agency which cannot in the long-run work advantageously, unless you fix upon the members of it some kind of responsibility such as I have spoken of. If you leave it quite to their voluntary agency you very often find that the want of continuous attention to the business gives rise to what you cannot but call neglect.

5285. Then am I to gather from you that you disagree from that recommendation?—Yes, I think I must say that I do.

5286. *Chairman.*] Have you read the whole of the context?—No.

5287. Then you are not aware that the report refers in a great many instances to cases where the governing bodies have been found totally unfit for the management of a school?—I am not aware of that.

5288. Therefore you think that that report would be perfectly correct if it did refer to such people?—Yes; certainly I should.

5289. Mr. *Waldron.*] You gave evidence with respect to endowed schools, did you not?—Yes; but I have not read that report.

5290. Do you agree with it?—I have stated that I do not agree with it. Assuming that that passage which I have read is the view of the Commissioners with regard to the general mode of governing schools; assuming that that is the way in which they think that all endowed schools should be governed.

5291. *Chairman.*] But as you are not aware of the context of that report, I dare say you would prefer not to give an opinion?—I think indeed that it would be more prudent not to offer an opinion on a detached passage of a report which I have not read; but if I should be assured that that passage represents the views of the Commissioners with respect to the mode in which all public schools should be governed, then I must say that I dissent from those views; of course it is a matter of opinion. I have had very considerable experience in the working of such institutions, and I entertain an opinion adverse to that which I assume in my answer to be the opinion of those gentlemen.

Sir WILLIAM R. WILDE, called in; and Examined.

Sir *W. R. Wilde.*

5292. *Chairman.*] YOU are a member of the Royal Irish Academy?—I am.

5293. Of very many years standing?—Yes.

5294. You are Vice President at this moment?—I was last year; I am now Secretary of foreign correspondence.

5295. I believe that you have been a member of the Council at short intervals for many years?—Yes.

5296. The department in which you have taken the chief interest has been the antiquarian department?—Yes.

5297. That Academy was originally divided into three sections; science, polite literature, and antiquities?—Yes.

5298. Do you think that there should be separate evenings set apart for the discussion of each particular subject?—I think that there ought to be separate evenings for special papers on each particular subject, science, polite literature, or antiquities, or any two of those subjects (for instance, polite literature and antiquities), which might be joined together; but I quite agree with the opinion of Professor Haughton expressed in this blue book, Report of Commission on Scientific Institutions in Dublin, that it would be advisable to divide the Academy into two separate sections, and I would have the subjects on which the papers were to be read and discussed distinct for each night of meeting, so as not to have the several subjects of discussion clashing and perhaps over-lapping each other.

5299. Would you have the same principle carried out with regard to any division of the grant?—Yes. I think that we antiquaries do not get as much as we should like, or as much as some people think we ought to have. I would divide the grant as much as possible for the furtherance of our own special department, after we had paid for the ordinary business of the Academy, and in keeping up the house.

5300. The original charter stated that one of the objects of the Academy was the encouragement of the study of antiquities?—Yes.

5301. What works on antiquities have been printed of late years?—In our Transactions only

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in means to carry them out." That application would naturally be referred to the committee of science, who would report upon it.

5455. Is that done in England?—I believe it to be done by the Royal Society; certainly in some cases the Royal Society give assistance to individuals.

5456. Does Trinity College give any such assistance?—In printing they do; and occasionally they will give assistance in another way. I remember getting a small grant of money myself from Trinity College in carrying out some optical researches in which I was engaged, which cost me a great deal.

5457. There are three objects for which you require assistance, firstly, scientific observations, secondly, the illustration of papers on the natural sciences, and thirdly, assistance to scientific individuals?—Yes, I think those are the most important.

5458. You have heard the evidence of Sir William Wilde upon the subject of the medals under the Cunningham Fund; in the year 1861, I see the council was requested to lay before the Academy its views with respect to the best mode of appropriating the Cunningham Fund for the future, and it reported on the 16th of March of the same year to the effect that with respect to the best mode of disposing of the fund for the future, "the council have not had time to examine it so carefully as its importance deserves; and recommend that it be referred to the new council for its consideration;" was that referred to the new council for its consideration?—I do not think any action has been taken upon it since.

5459. Can you explain to the Committee the reason why those medals have not been distributed in the case of the antiquities department?—It is not so easy for me to explain it; I do not know sufficient of the particulars of the state of things to which Sir William Wilde spoke, to speak decidedly upon that point, except that there was no reluctance on the part of the council at large to distribute the medals. The council never within my knowledge, nor do I believe has it ever, refused to confirm the adjudication of the committee; and where a medal is not given, it must always be because it is not recommended to be given by the committee. I never knew an instance of the committee recommending the giving of a medal, and the council refusing to sanction the recommendation. There is no doubt that we are occasionally slow in giving the medals; sometimes from inadvertence it has happened several times that the committee have not met exactly at the time they should, to consider the distribution of those medals. I know of no other reason.

5460. Do you attach much importance to the giving of those medals?—In a sense, I do; I must modify my answer there; I do not think that a medal will ever make a man write, and I have said at the council, that I do not think the giving of medals simply for books published outside the Transactions of the Academy, except as a graceful tribute to the author, is of any practical benefit to science. It is a benefit to the Academy, for if they have the power of giving those distinctions, it may tend to make the author publish his discovery through the Academy, rather than in any other way; it will attract papers towards the Academy. But speaking of my own department, I do not think that a medal or any other distinction of that kind will make a man of science write, where he would not have written otherwise. The fact is, with science, where you have made a discovery, you must tell it. A scientific discovery is a thing that burns inside a man till he tells it.

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5461. Do you think that the medals are of very great importance to men of such recognized position as Professor Haughton, or Dr. Todd, or Sir William Wilde?—I think that they all like to get them; I was very proud to get mine.

5462. May the same individual get medals more than once?—Yes.

5463. What is the value of the medals?—They are gold medals; they cost 22*l.*

5464. Do the terms of the bequest require that the money should be spent in this way?—It must go in prizes; not necessarily medals.

5465. Mr. *George.*] There is no discretion in the Royal Irish Academy; they are merely trustees to administer the fund?—Yes.

5466. Mr. *Waldron.*] As to the library, the members of the Academy have the privilege of borrowing books from it, have they not?—They have.

5467. Has there ever been any question raised as to withdrawing that privilege?—The question has never seriously been entertained, within my recollection.

5468. Would you consider it detrimental to the interests of the Academy if that privilege should be withdrawn?—I should.

5469. You consider it an advantage to persons engaged in scientific pursuits especially, to have power to borrow books out of the library?—Yes; especially a certain class of books; namely, those books that belong to long and expensive sets; for example, transactions of learned societies. If I want a volume of the transactions of any learned society, I go to the Academy, and borrow it. I should not know where to buy it, and I could not afford to buy it if I did. It would cost, perhaps, 100*l.*; but I borrow it there; and I am able to take it home.

5470. Have you seen the Report of the Committee which sat on Public Libraries in 1849?—I cannot say that I have.

5471. Will you read that passage (*handing the Report to the Witness*)?—"They have recognized in the establishment of libraries the general principles that they should be based on a firm and durable foundation; that they should be freely accessible to all the public; that they should be open during the evening; and that they should as far as possible be lending libraries. The last consideration is one of great importance. Many men in order to derive the fullest advantage from books must have them not only in their hands but in their homes. A great public library ought above all things to teach the teachers, to supply with the best implements of education those who educate the people, whether in the pulpit, the school, or the press. The lending out of books, therefore, which is a general characteristic of foreign libraries, should be an essential element in the formation of our own."

5472. Do you agree in that opinion?—With part of it. I entirely agree with it with regard to books that cannot be ordinarily got from an ordinary lending library. I think, in that sense, it is a great function of such libraries as that of the Royal Irish Academy to lend books that cannot be got at ordinary lending libraries. I think the advantages and disadvantages perhaps are

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more balanced when you come to the case of ordinary books that can be got from an ordinary lending library. I do not feel quite so certain about it in that case. As to the other class of books I wholly agree with that paragraph of the Report.

5473. Will you read that paragraph at page ix?—"Looking to the British Museum as a library for reading, the large number of duplicate and even of triplicate copies existing in it claims our first attention. The number of them is stated to be about 52,000. It has been suggested by Mr. Edwards that 'No better use could be made of these duplicates than to constitute them into a lending library, and that the triplicate copies might most usefully be presented to provincial libraries.' In this suggestion your committee are disposed to coincide."

5474. They contemplated making a part of the books in the British Museum a lending library?—Yes. With regard to duplicate and triplicate copies I think it would be very desirable to carry out that suggestion.

5475. *Chairman.*] Are you aware that Mr. Panizzi says there are no such duplicates at all?—No; I should suppose Mr. Panizzi is the best authority upon that subject.

5476. Mr. *Waldron.*] Will you read that passage at page v.?—"The question naturally suggests itself, whether libraries thus privileged either to exact the contribution of a work from its author or to receive annually a sum of money instead thereof, are not bound to make some requital to the public by throwing their literary treasures (so far as they can reasonably do so) open. Your Committee are of opinion that, in the absence of any valid reason to the contrary, they ought to do so."

5477. Do you join in that opinion, that where aid is given by Act of Parliament in books, under the Copyright Acts, though not in money, the libraries to which that aid is given ought to give something in return to the public?—I think that they ought, certainly, to give something in return to the public, and, no doubt, such a library ought to be so regulated as to produce the greatest amount of advantage. The question is, whether you ought not to have large libraries of deposit in the country, which should not be lending libraries. I suppose the refusal to lend out books from the British Museum Library, for instance, would be defended, possibly, upon grounds of that kind; that it was on the whole more advantageous to the public that it should be preserved as a great library of deposit than that it should be made a lending library.

5478. Assuming that it might be desirable, if Trinity College were disposed to accede to it, to allow the library of Trinity College, which receives books under the Copyright Act, to be treated as a library of deposit and research, do you think that it would be desirable, then, to maintain the library of the Royal Irish Academy as a lending library?—With regard to the library of the Royal Irish Academy, I think it eminently calculated to be a lending library, because the books come largely under the class of those books which are usefully lent out, namely, those books which men cannot commonly get. I do not believe the library of the Royal Dublin Society (I speak with all reserve, because I know little about it) is so completely of that character as the library of the Royal Irish Academy.

5479. Generally you agree with the view of the Committee?—If large libraries of deposit are reserved, I think the power of lending out books is an exceedingly useful one, more especially the class of books to which I have alluded.

5480. Mr. *George.*] With reference to the distinction you draw between lending libraries and scientific libraries of deposit, would you not give large discretion to the governing body of the library to set apart one portion of the books that might be lent out, and another portion that they would say ought not to be lent out?—I think wherever you made it a lending library, that discretion should exist in the governing body.

5481. Sir *Edward Grogan.*] As to the medals, the medals are all gold, and of substantial value?—Yes.

5482. Is it perfectly clear from the terms of the bequest, that you could not apply the interest, derivable from the fund in the direction to which you referred just now, namely, in aid of students engaged in any particular branch of science?—We considered that question, and came to the conclusion that we had not the power to do it.

5483. Do you find too many applications, and too few medals, or *vice versâ*?—I do not think that there are too many applicants; we have quite as many medals to give as there are persons to get them.

5484. Is the bequest in such terms that it must be given in the shape of a prize?—Some kind of prize; it was originally given for an essay on a particular subject, but it was found that that did not work. A subject was named upon which an essay was to be written; it was found that did not work; indeed, it very seldom does work. In the French Institute, where the system prevails of giving medals in the higher class of mathematics, for example, one can scarcely say that it has worked well. When you read the report of the committee upon those medals, it is usually in some such terms as these: the committee having considered the question, do not find that any one of the essays merits a prize.

5485. The medal given by the Academy is in itself a distinct mark of honour, is it not?—Certainly.

5486. It is more valuable than the intrinsic value of the medal itself?—Yes.

5487. If the medal were of bronze, worth intrinsically about one-fourth of the price, would not it be equally prized and treasured by the recipient?—It ought to be; but somehow or other there is a tendency to attach greater value to gold than to bronze, even when it is meant as a honorary distinction.

5488. *Chairman.*] There has been some question raised as to the amount of the funds appropriated to science, while the sum devoted to antiquities has been extremely small, 54*l.* or 55*l.* a-year. Is not a very large proportion of your income applied to printing your minutes and proceedings?—A considerable amount.

5489. A moiety?—No; our salaries alone amount to 380*l.* a-year.

5490. The Antiquity Department gets the full benefit of whatever printing it may require?—Yes.

5491. That would therefore reduce the apparent inequality in the amount devoted to the respective departments?—Yes. With regard to printing, the Antiquities Department will get as much as the Scientific Departments, if they produce the same number of papers.

5492. So that there is not any great inequality in that

that respect between the two branches of the society?—Whatever inequality exists must be from non-production of papers, because there is no tendency whatever, that I know of (I certainly disclaim any) to stint the Antiquities Department in the publication of papers on subjects of antiquarian interest.

5493. Any antiquarian paper would be quite as likely to be printed at the expense of the Royal Irish Academy, as a scientific paper?—I believe it would.

5494. Mr. *Waldron.*] As certain, in point of fact?—Certainly. Nothing limits our publication of papers, but either that we have not money wherewith to publish them, or that papers do not come forward of sufficient merit. With regard to the merit of antiquarian papers, it is decided on practically by the antiquarians.

5495. Sir *Edward Grogan.*] By the Committee?—It comes before the committee of publication, which consists of seven members; three of the committee of science, two of the committee of polite literature, and two of the committee of antiquities; and they request some person who is conversant with the subject, to give them a report upon the paper. If it is a scientific paper, they request some eminent scientific man in the society to give them a report upon the paper. If it is an antiquarian paper, they request some eminent antiquarian to do the same. If that report is a favourable one, as a matter of practice the paper is printed. No doubt it has to be first passed by the committee of publication, and then passed by the council; but as a general rule, and as a matter of practice, the report of the person to whose consideration it is referred, will carry it.

5496. *Chairman.*] You said that you were of opinion that the establishment of a library of deposit in a town was a matter of great importance, do not you think that in Dublin, the capital of Ireland, there ought to be a great library of deposit and reference?—I think it would be highly advisable.

5497. Do not you think where libraries are paid for by the public, the public should have the full benefit from them?—So far as is consistent with their safety they ought.

5498. You do not think that there ought to be any exclusive privileges?—That depends upon what you call exclusive. It may possibly be thought right that for the advantage of every one, it should be only a certain class of men of a certain degree of education, that should be admitted. An exclusive privilege may, or may not, according to your definition of it, be useful.

5499. If the private contribution to the library was only 60 *l.*, and the public contribution was over 900 *l.*, would you consider that library of the character of a public library, or a private one?—Much more of a public one; of course, it would partake to the amount of 60 *l.* a year of the character of a private library, while it would partake of the character of a public library to the extent of the 900 *l.*

5500. Would you say that no books should be taken out of that library, or that if they were taken out they should be taken out without reference to any particular privileged class?—I could hardly answer that question without knowing what kind of privileged class you mean.

5501. Take, for instance, the members of the Royal Dublin Society; would you confine the privilege of taking out books to that class, in a library so paid for, or would you allow books to be taken out by persons not members, provided they were of a class that could appreciate the books, and make good use of them?—I think probably the disadvantage of a system of that kind would be this: a society like the Royal Dublin Society, or the Royal Irish Academy, or any of those societies, receives a good deal of aid from subscriptions; and, in fact, if you did not give men certain privileges in consequence of their membership, you would not be likely to get members; that would be one disadvantage of such a system.

5502. You think the advantages of getting members counterbalances any little inconvenience that may arise to the public?—At the first blush it seems to me so, but it is a question that I have not considered.

5503. Mr. *Waldron.*] Of course, the security of the books in the library is a great considera tion?—Yes.

5504. Do not you think that members of a society like the Royal Dublin Society, give a sort of guarantee, by their membership, that they will take care of the books, which the public outside could not give?—Certainly; that is one of the things I alluded to in speaking of the consideration of safety. A book can be more safely lent to members of the society than to anyone else.

Lunæ, 26° *Junii*, 1864.

MEMBERS PRESENT:

George, Mr.
Gregory, Mr.
Grogan, Sir Edward.
Lefroy, Mr.
O'Loghlen, Sir Colman.
O'Reilly, Major.
Peel, Sir Robert.
Waldron, Mr.
The O'Connor Don.

WILLIAM HENRY GREGORY, Esq., IN THE CHAIR.

CAPTAIN JOHN F. D. DONNELLY, R. E., called in; and Examined.

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5505. Sir *Edward Grogan.*]—WHAT appointment do you hold in the Science and Art Department?—I am Inspector for Science in the Science and Art Department.

5506. You paid one or two visits to Dublin, with reference to the Scientific Institutions in that city?—Yes.

5507. You made an examination and report some short time ago on your first visit, when the estimate of 9,500 *l.* was submitted to you on the part of the Royal Dublin Society, as absolutely requisite for them to fulfil the duties imposed upon them?—That was not my first visit to Dublin; I had been twice or three times before that, but I went to report on certain estimates that had been sent in for further works required to put the Royal Dublin Society in a complete state of efficiency.

5508. You are of course aware of the state and condition in which all the buildings and educational arrangements are?—Yes.

5509. And you are aware that a considerable expenditure is absolutely necessary to enable them to fulfil the functions intrusted to them by Parliament?—Yes.

5510. You made a report to that effect to the Department, did you not?—To the Science and Art Department, which was forwarded by them to the Treasury.

5511. Did you yourself, after making inquiry, form any opinion as to the amount that was necessary for putting them in that proper state of efficiency?—I went as carefully as I could into the subject when I was there, and I came to the conclusion that the estimate that was given in was apparently a very fair one and would put the buildings in, I cannot say a perfect state, but a tolerable state of efficiency; there might have been some further demands required to be met.

5512. You received that estimate from the gentlemen connected with the Society, they submitted it to you?—Yes; I may state that Lord Granville had been over, I think about five or six months previously, and had visited the Royal Dublin Society, and I think a Committee of the Royal Dublin Society had prepared that memorandum for him; when he came back he gave me the memorandum, and I was then directed to go over to Dublin and to go more into the details of the subject than he had had time to do.

5513. On your report that a considerable sum of money was requisite to put the different departments of the society in full and efficient working order, did the authorities in England consider it desirable to issue a commission to inquire more fully into it?—On my reporting on the subject to the Committee of Council on Education, they considered that as it was a large sum, it was a good opportunity and it would be better, in referring it to the Treasury, to suggest that the whole question involving the Council of the Royal Dublin Society, with reference to the position of which I had made some strictures in my report, the Museum of Irish Industry, and grants to Scientific Institutions in Dublin in general, should be reconsidered and put upon a proper footing, as there were continuous applications for increased grants.

5514. That was the origin of the Commission?—Yes.

5515. The Commission had to inquire into the three leading particulars you have referred to, and which you refer to in your report, namely, the constitution of the Council of the Royal Dublin Society, the Institution of the Museum of Irish Industry, and the expenditure requisite to be made?—Yes. I may, perhaps, be permitted to read a letter now in reference to a question which I heard the Chairman ask Dr. Greaves with respect to the points which the Commission were directed to inquire into. I was not aware till that moment that all the information upon that subject was not before the Committee. It is a further letter from the Treasury, directing the Commission to investigate some further points, such as with regard to the Royal Hibernian Academy, and the Royal Irish Academy. This is a letter from the Treasury to me as the secretary to the Commission, dated 26th of September 1862: "I am directed by the Lords Commissioners of Her Majesty's Treasury to transmit, herewith, for the consideration of the Commissioners of the Inquiry into the Royal Dublin Society, copy of a letter from the Science and Aid Department, containing observations relative to the subjects to be investigated by the Commissioners, and I am to authorise them to extend

extend their inquiries as suggested by the Vice-President of the Committee of Council on Education." The letter referred to, dated 21st August 1862, of which I have a copy here, commences with the approval of their Lordships in my appointment as a Commissioner, and to act as Secretary; but the paragraph immediately referred to in that letter is this, "Parliamentary Votes in aid of Science and Art are made to other Institutions in Dublin, besides those named in the Treasury Minute." (*Letters handed in.* See *Appendix*).

5516. Mr. *Waldron.*] You had reached Dublin when you received that letter from the Treasury?—Yes, I think so, or it was just before leaving England.

5517. Sir *Edward Grogan.*] You considered that letter as a supplement to the Minute under which the Commission in Dublin was held?—Yes; it was on that authority that we touched upon the Royal Irish Academy.

5518. Were you connected with the Science and Art Department in 1854?—No; I was not connected with the department till some time later than that.

5519. You of course must be aware, from records in the office, that previously to the time of Dr. Playfair's letter, the professors who were afterwards transferred to the Museum of Irish Industry, were exclusively belonging to the Royal Dublin Society?—Yes; I think there were only two professors then at the Museum of Irish Industry, but I am not quite sure.

5520. You are familiar with Dr. Playfair's letter?—Yes.

5521. His recommendation was, that the professors and the educational functions of the Royal Dublin Society should, generally speaking, be transferred to the Museum of Irish Industry, was it not?—Yes.

5522. Are you aware whether there had been any inquiry by the Science and Art Department previously to 1850, which led to the passing of that Minute?—I know that for some time it had been a constant endeavour on the part of the then just created Department under the Board of Trade to encourage in every way the scientific and artistic education in Ireland. As far as I am able to find from the records in the Department just at the end of 1853, I think it was, Mr. Cole was directed by Mr. Cardwell, then President of the Board of Trade, to go over to Dublin, and inquire into the subject. I have here, what perhaps will be interesting, as showing the views of the department then on the subject of industrial education in Ireland, a memorandum, drawn up by Mr. Cole, with suggestions from Major Larcom, on the subject of industrial instruction in Ireland, which I will hand in, but two or three paragraphs of which I may read now. It is endorsed, "Letter to Mr. Cardwell, with Major Larcom's suggestions." The view then apparently was to institute a full system of industrial instruction, commencing with the national schools, going through the model schools, and culminating in a great industrial college in Dublin. In that memorandum will be found the following paragraphs: "By such a united action between the national schools, the training schools, the colleges, and the Queen's Universities, I feel persuaded a complete course of industrial education might be secured to the whole of the Irish people, probably much more perfect as a system than could be established in England or Scotland. But still a culminating point for industrial education would be necessary, as it is for medicine, law, &c. Students are prepared at the Queen's Colleges for the faculty of medicine, but they come to Dublin to complete their course at the hospitals, &c. And so should the student of industrial Science and Art. In Dublin he should be able to find the highest technical instruction, with access to museums and collections larger and more complete than could be found in the provinces, and I therefore think that a special college for applied Science and Art, in unison with the existing institutions, would have to be created in Dublin. There are already materials for founding such an institution, on the objects of which a large expenditure already takes place; but the action is dispersed and ill-defined. There is the Museum of Irish Industry, and which is also the central Office of the Geological Survey, with its professors of chemistry, and its collections, supported by public funds, directly responsible to Government. There is the Royal Dublin Society, with its professors of chemistry, natural history, &c., with botanic gardens, partial museum, &c., supported in the main by Parliamentary funds, but arranged by a society of private gentlemen, under a council and committee, and very imperfectly responsible for the administration of the public money, which has averaged, for many years, 6,000 *l.* a year. The professors are elected by the society at large. The anomalous position of this Society has frequently excited the attention of Parliament and of the Irish Government, and as shown by the report of a Committee which sat in 1836, and a Commission appointed in 1842, and as shown in an accompanying paper prepared by Major Larcom," and so on. Then the conclusion of the 18th paragraph is this: "As a first step, it appears desirable to separate the lines of action between the Museum of Irish Industry and the Royal Dublin Society. This may be done, I think, without difficulty, by confiding the promotion of direct instruction to the proposed college, and the administration of certain public exhibitions to the Royal Dublin Society. The Museum of Irish Industry would then become the College of Science and Art in Dublin having charge of the administration of direct instruction, and representing the department in the capital." (*The Memorandum was handed in.*—Vide *Appendix.*)

5523. Do I understand rightly that it was on the suggestions contained in that Report, that the Minute of 1854, which proposed to take from the Royal Dublin Society all its educational functions, was founded?—Yes; Dr. Playfair was then directed, I believe, to go more in detail into the matter, and he then drew up the Minute of 1854.

5524. That Minute, and the consequent action, was entirely in favour of establishing a scientific and industrial institution in Dublin, which was subsequently set up?—Yes.

5525. In so doing, the educational functions that had hitherto been exercised by the Royal Dublin Society, and to which they attach great value, were transferred from them to another body?—Yes.

5526. The purport of that Minute, and the action consequent upon it, seems to have been all in favour of the Museum of Irish Industry, and against the Royal Dublin Society?—Yes, it was broadly to make the Museum of Irish Industry

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the educational institution, and the Royal Dublin Society the exhibitional institution; that was the broad principle of the Minute; I do not know that it was quite fully carried out.

5527. The view of your department and of the Government at that time was to make a grand experiment in scientific education in Ireland?—Yes.

5528. You were one of the Commissioners who held the inquiry in Dublin in 1862?—Yes, I was; but I should wish to state, for fear of there being any misapprehension, that I have no right or authority to speak for the Commission in any respect. The opinions I may give here are simply my own opinions, not those of the Commission as a body, or of the other Commissioners.

5529. The Report of that Commission differs very materially in its aim and object from what appears to have been the aim and object of the Science and Art Department, and the Treasury authorities in 1854?—Yes; the policy, if I may so say, of that report is, to a great extent, different from that of 1854.

5530. It would appear, then, that the great educational experiment which the authorities were anxious to institute in 1854 they have for reasons known to themselves, and from fuller information, thought it desirable to modify again?—Yes; I may say the whole principle governing the grants towards industrial instruction has been changed between 1854 and the present time; that the Department grants are re-made on a different principle and with different views. At that time, I think the idea as to the best form of aid towards scientific instruction was mainly in the way of training teachers, and starting at that end, if I may so say, of the instruction. It has been found since that that does not succeed well. When you have trained your teachers there is no way of employing them, whereas by offering sufficient inducements, you can find qualified local teachers without establishing a regular training college; and it is on that policy that the present action of the department is based.

5531. Since 1854, I believe the present system of Science Schools has been established?—Yes; it was established by a Minute of Lord Salisbury and Mr. Adderley in 1859, and that Minute itself was greatly modified within the next year or two.

5532. One of the objects of that change was, I believe, mainly directed to make those schools self-supporting, and to train teachers for the future?—The object of that system was to give grants in such a way as would lead to the establishment of self-supporting schools, so that the grants should not be a permanent and increasing expenditure.

5533. Was the obtaining of teachers contemplated under that system?—No, under the Minute of 1859 there is nothing in the shape of aid towards training teachers. It may naturally be expected that the fact of the establishment of schools all over the country will aid in furnishing further teachers; but I may say that already there has been no absolute difficulty found in obtaining teachers. At the present moment there are 95 science schools and classes and 332 certificated science teachers, and, with the exception of seven or eight, those have all been certificated since the passing of the Minute of 1859, and that fact shows that it was unnecessary to establish a training school for the training of science teachers.

5534. The expectation when the Science Schools were established was that they would be the means of calling forth scientific teachers, without the necessity of training them at the expense of the State?—Yes, but even before the schools were established, it was found that by offering a sufficient reward you could obtain qualified teachers who had got the instruction for themselves.

5535. How many trained teachers, in the full sense of the word, have emanated from the Museum of Irish Industry since it was established, that having been one of the objects of the original institution of that establishment?—There is only one teacher that I am aware of that has taken the certificates of the Science and Art Department that has received his instruction in the Museum of Irish Industry.

5536. I understood you to say that one of the great objects of the change in 1854 was to establish a scientific college as it were, to supply trained teachers to instruct the people of the country in those sciences?—Yes, I think the object in 1854 was to establish a kind of industrial college and ultimate school to arrive at, after going through the elementary schools, and no doubt that college had in view the training of teachers as well as granting of certificates or degrees.

5537. *Chairman.*] The science-teaching system of payment by results, was not instituted at that time?—No, it was established by the Minute of June 1839.

5538. Consequently, naturally it was not intended to educate teachers for the science system?—Not for the present system, but for the then existing system.

5539. Sir *Edward Grogan.*] It was intended to train teachers at the time it was established?—I think one of the objects of establishing the instruction in the Museum of Irish Industry was to educate teachers.

5540. *Chairman.*] Teachers would have had to come over till recently, to be examined at South Kensington?—Yes; under the Minute of 1859. Mr. Dowling who got his instruction at the Museum of Irish Industry came over to London for examination.

5541. Sir *Edward Grogan.*] The Science and Art department having been the parents and founders of the institution of the Museum of Irish Industry have occasionally sent over their officer to visit all the scientific institutions in Dublin, and you have gone over in that capacity?—Yes, I have been over two or three times. I may add that Mr. Cole went in the autumn of 1859, to make arrangements relative to the curator and assistant chemist in the Museum of Irish Industry, and I think he also visited at that time the Royal Dublin Society, and made a report.

5542. The practical result of your evidence I take to be this, that subsequent to 1854 the Museum of Irish Industry was established for the purpose of forming a great scientific and industrial college in Dublin, and principally at the expense of the Royal Dublin Society, so far as the removing the professors, and the teaching from them?—The change removed the professors, and so far, one may say, at the expense of the Royal Dublin Society.

5543. That was a great experiment which, in the

the interests of the country, and for the advancement of the people in scientific knowledge, the Department and the Treasury thought it desirable to make?—Yes.

5544. Subsequent information, and the new arrangements of Science Schools, induced the authorities to reconsider that arrangement?—Yes; every endeavour is now being made to make the system as self-supporting as possible, and not to make it a centralized Government educational work, but to stimulate and aid voluntary effort in establishing schools from which the Government aid may eventually, as they increase, be withdrawn. I may, perhaps, call the attention of the Committee to a paragraph in the last revise of the Science Directory of September 1863—the Committee of Council considered it right to insert these paragraphs: "The object of the grant is to promote instruction in Science, especially among the industrial classes, by affording a limited and partial aid, or stimulus towards the founding and maintenance of Science Schools and classes. The payment of fees by the students must be looked upon as the only solid and sufficient basis on which a self-supporting system can be established and supported. Though my Lords do not consider it necessary, at present, to lay down any rules making the payment of fees an absolute condition of the grants, on account of science instruction, yet, as the payments from the State must be expected to diminish, and as aid on account of those persons who do nothing for themselves, cannot be justified, committees of schools, and classes, and teachers, are strongly urged (should it at present not be the practice) at once to impose as high a scale of fees as they consider can be raised, not only on middle class students, but also on artisans." And there is a note stating, with regard to the grants, that "The amount is liable to be decreased and eventually withdrawn. Payments to teachers, therefore, must not be looked upon as perpetual, or in any way conferring on the teacher a claim to any payments beyond those offered for each current year." And, with reference to the payments, the following note: "Direct payments are made to teachers only on behalf of adult artisans, or the children of persons who are not assessed to the income-tax, or who do not possess an income of 100 *l.* per annum."

5545. The practical result, however, of all the inquiry and consideration of the Science and Art Department and the authorities in this country, has been to restore, in a considerable degree, though in a modified form, the educational functions to the Royal Dublin Society which it previously exercised?—If the report of the Commission, of which I was a member, were carried out, it would of course give the Royal Dublin Society certain lectures which would be supported mainly, if not entirely, by Government grants.

5546. So far it would be a restoration of the Royal Dublin Society to those functions which they, previously to 1854, had exercised?—Yes.

5547. That report, I believe, has been approved of by the department and by the Treasury?—The report was made to the Treasury, and the Treasury, I think, then referred it to the Science and Art Department, and after some consideration, including a letter from the Irish Government, it was finally approved of by the Treasury.

5548. With regard to the fitness of the Royal Dublin Society to carry out such a scheme as that, various objections have been made to their fitness in this respect, namely, the fluctuating and non-scientific character of the governing body of the Society; do you consider those objections valid?—With reference to the fluctuating character of the governing body, it was one of the conditions under which the recommendation of increased grants was made, that the council should be put on a different footing, and not continue a fluctuating body, but have a more or less permanent character, by not being open to election every year; and, also, that they should have full power to carry out any measures that they thought right, without constant reference to the Society at large.

5549. Assuming that alteration to take place in the constitution of the council, would you consider those objections to the Royal Dublin Society being entrusted with those functions as valid or well-founded?—No, I see no reason why they should not be entrusted with those functions.

5550. Has it come to your knowledge, as an officer of the department, that the Royal Dublin Society have professed their utmost willingness to carry those recommendations into effect, so far as they themselves are concerned?—Yes; I am aware that a deputation from the Royal Dublin Society came over and saw Lord Granville and Mr. Lowe on the subject of what changes in their charter would be considered necessary, and what would meet their views; and I believe that the proposals that they made were entirely in accordance with the views of the Committee of Council.

5551. The Society have expressed their perfect readiness to cary them into effect?—I understood that they were going to carry them into effect; but the appointment of this Committee, I think, stopped further action in the matter.

5552. The department have no reason whatever to doubt the readiness of the Society to carry those recommendations into effect?—No, we have no reason to doubt it.

5553. I will repeat the question I put before: Supposing those recommendations were carried out, do you consider the fitness of the Royal Dublin Society to carry out that scheme of education to be fully proved?—Those were the views which the Committee of Council had on the subject.

5554. Do you know any other similar institutions in this country, the constitution of which is very analogous to that of the Royal Dublin Society; is it the fact that the Royal Institution in Albemarle-street is substantially the same?—To a certain extent, it does not receive Government grants, but it has scientific professors, who deliver lectures, and they are, I believe, responsible to the Council. In that respect it is similar, but it receives no Government grants.

5555. Their professors are all of the very first class in scientific attainments, are they not?—Yes; they have been always the most eminent men in the country: Professor Faraday, Professor Tyndall, and Professor Frankland, for instance, are now their professors.

5556. The results of their teaching have been satisfactory?—Yes; their lectures have been always considered the best in the country.

5557. Do you know how those professors are elected in that Institution?—I am not quite sure whether they are elected by the Council or by the members at large.

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5558. With respect to a question of finance, a paper has been handed in by Sir Robert Kane, the President of the Museum of Irish Industry, and evidence has been given upon it, to show that no saving of the public money would be effected by carrying out the recommendations of your report; have you seen the paper handed in by him?—Yes; I saw it the other day, when I was waiting to be examined.

5559. Have you also seen the estimate for this year, ending the 31st March 1865, under the head of "Museum of Irish Industry"?—Yes.

5560. I presume, of course, the estimate conveys the opinion of the Government as to what would be the expenditure in that Institution?—This is the estimate for the year.

5561. That conveys the opinion of the Government as to what would be the expenditure of that Institution?—Yes.

5562. Does that accord with Sir Robert Kane's estimate?—Sir Robert Kane's estimate begins with a curious statement. It is headed, "Analysis of the Grants to the Museum of Irish Industry; showing the Amounts taken really for the service of the Museum, and the Amounts which properly belong to other establishments, and ought to be charged under other heads." It seems to me that that is a question simply of what estimate you choose to put it under; the expense remains the same whether you put expense of buildings, rents, rates, and taxes, and so on, under one head or the other; the expense to the country is still the same, and the 803 *l.*, which is the total as the charge to the country, would not be saved by putting it under another vote. It would not be fair, perhaps, to compare the Museum of Irish Industry, and take its whole expense against another museum, of which the rents, rates, and taxes were taken by the Board of Works, but the fair way to compare the two would be to state the rents and rates, and so on in each case, but not to deduct them. Then, I see here in the next item, "Half Salaries of Five Professors." It is not necessary to refine on this; but they do not give half their lectures to each institution. I do not know that that is very important; but, with regard to the next statement, No. 2, there is on one side, "Present Expenditure, to be saved by the new arrangements;" and then on the other side is the "New Expenditure, necessarily incurred under the new plan." The present expenditure to be saved by the new arrangements is a saving in perpetuity. "Retiring allowances (taken at three-fourths) for the abolition of office of the Director, Curator, Chemist, Professor of Physics, Professor of Chemistry, and Professor's Clerk" are not in perpetuity at all. The items as stated under those two headings are not comparable. The items under the first head are worth 30 years' purchase, while the others, under the second head, when we consider that the allowance is determinable not only by the death of the holders, but also by their holding any other Government appointment, I suppose might be taken roundly at 10 years' purchase; so that putting them as has been done, and totalling the two up, is a very fallacious way of making an estimate.

5563. You do not agree with that estimate of the money to be saved if the recommendations of the report were carried out?—Not at all; this would give a false impression of the absolute state of the case. Then there is "New Professor of Mineralogy" put at 200 *l.*; there is the Professor of Mineralogy in existence, and an arrangement would have to be made for his resuming his duties or giving up his pay. I do not understand "resumed by Professor of Botany." Then, again, here under "present expenditure to be saved by the new arrangements," I see that the saving of 803 *l.*, which is stated above to be the payment for rates, rents, and taxes, and buildings and repairs, is not taken into account at all; that must still be a saving, even if the vote be taken as proposed by the Office of Works. There are some other points that are omitted; the item in the Estimate for the year for the purchase of specimens for the Museum and books for the Library, amounting to 400 *l.*, is not taken into account; repairs and furniture are included in the 803 *l.*, which I have already stated does not appear below as a saving; then there is fuel, light, cleaning, &c., uniforms for porters, advertisements, printing, travelling expenses, all these amounting to a considerable sum, have not been at all taken into account, in the "present expenditure to be saved in the new arrangement."

5564. According to this estimate of Sir Robert Kane, an additional expenditure of 160 *l.* a year would be incurred by the proposed change, instead of a saving?—Yes; apparently by this statement.

5565. An increased expenditure of 160 *l.* would apparently be incurred, and not a saving, if the recommendations of the Commissioners were carried out?—Yes.

5566. Do you consider that that statement has omitted many most important items in which a saving would be effected?—Yes; to begin with, there is the 803 *l.* to be saved, besides the others I have mentioned.

5567. In the manner in which the future expenditure is calculated, it has not been stated, as you think, correctly?—No; because even supposing that those items were right, you could not compare the 1,760 *l.* with the 1,920 *l.*

5568. The one is an absolute saving, while the charge in the other case is a terminable one?—Yes.

5569. So that, if the Committee relied upon that statement as an estimate of the saving to be effected, they would be misled?—I think so, certainly.

5570. It has been given in evidence before the Committee that all the examinations of the pupils taught have been conducted over here, which was supposed to have a centralising effect; I believe a change has been made in that respect lately?—The examination of schools and classes have always been local; any place, whether they have a science teacher or not, may always have an examination in the place. If a satisfactory Committee is formed in a place, they may have the examination of the Department. With respect to teachers, the first few examinations in which it was thought necessary to examine the teachers *vivâ voce* were necessarily held in London, where the examiners were; but it is now considered not necessary to have a *vivâ voce* examination of the candidates who come for certificates as teachers. Examinations have consequently been held in Dublin and in Edinburgh, and if it was thought desirable, I daresay they might be held at other places; but those three centres are quite sufficient, because all the travelling

travelling expenses of the successful candidates are paid, if they are *bonâ fide* teachers.

5571. Those who should unfortunately fail have to bear their own expenses?—Yes; it would not do for the department to pay the expenses of anyone who chose to come to London and merely came up for examination.

5572. The fact of allowing those gentlemen who go in for examinations to be examined locally is, of course, a great boon to them, and does away with all idea of centralization on the part of the Science and Art Department?—No doubt it is a certain boon. I daresay it is a considerable boon to candidates in science in Ireland and Scotland not to have to come to London; they do not risk so much, though, of course, if a man is well prepared, he must know pretty certainly whether he would pass or not; but I daresay, on the whole, it is a certain boon to them.

5573. The present policy of the department is to carry out that principle in the great centres of the three kingdoms, and to extend it to others, where the proper appliances for examination exist?—No doubt, if it were found desirable, they would extend it; that is to say, with respect to teachers. With respect to classes, of course there are local examinations wherever a class is formed.

5574. Will you look at that report on the Geological Survey, the Geological Museum, the School of Mines, and the Mining Record Office (*handing it to the Witness*). Is that dated 1862?—Yes; it was made in 1861. The report was signed in 1862, after communication with Sir Roderick Murchison and the professors.

5575. The institution in Jermyn-street is not so wide in its scope or objects as the Museum of Irish Industry?—No; it always has been restricted to a school of mines purely.

5576. In this report of 1862, paragraph 11, the Commissioners, Lord Granville, Sir Charles Trevelyan, and Mr. Lowe state:—"The professors agree that in view of the practical necessities of the existing class of mining students, the instruction at present embraces too wide a range of study in certain directions, and might with advantage be more closely confined to those sciences which directly bear upon mining." That is the view of the Commissioners at that time?—It is not only the view of the Commissioners, but it is the view of Sir Roderick Murchison and the professors. Sir Roderick in his letter says:—"Sir,—In consequence of your letter of the 20th inst., with the accompanying proof of the Report of the Lord President and his colleagues, upon the state of the Geological Survey, and its affiliated Departments, including the Government School of Mines, I called a Council of the Professors, to ascertain if their views on points whereon they had been consulted by your Board, were correctly and adequately expressed in the Report. On consideration, it appeared to them that the paragraphs 8, 9, and 11, which explain the nature of the instruction given in the School of Mines, call for some modification in order to represent their views. All the professors having attended, and the paragraphs in question having been discussed *seriatim*, it is suggested that the wording of the same be amended in the following manner:—Paragraph 11,—'The professors agree that, in view of the practical necessities of the existing class of mining students, the instruction may at present embrace too wide a range of study in certain directions, and might with advantage be more closely confined to those sciences which directly bear upon mining. But they also observe, that the instruction begins at an elementary point, because the students do not come sufficiently prepared, and that certain very essential branches of a mining education are not represented in the school. The professors therefore suggest, that it would be desirable to add mining surveying, and the construction of mining and metallurgical machines, to the courses of instruction, and to exclude some subjects at present taught from the mining curriculum.'" And paragraph 11 was accordingly amended in the draft report exactly in those terms as proposed by Sir Roderick Murchison.

5577. That recommendation amounts to this, that special instruction in mining should be given, and that the attention of the institution should not be directed to other objects?—That it should be restricted to a School of Mines purely, for the mining industry of the country, and that it should not be a school or college of general science. It was the view, I believe, of Dr. Playfair at one time, when he was at the department, to enlarge it to a school or college of general science, and all the professors at Jermyn-street were very much opposed to such an enlargement. Afterwards, when this report was made, of course it more clearly defined the exact bearing of the school.

5578. Limiting it to a school of mining?—Yes.

5579. Was paragraph 25 of this report also approved of by the professors in the manner you have described paragraph 11 to have been?—There is nothing about it in Sir Roderick Murchison's letter. It was not taken exception to, or any remark made on it in Sir Roderick Murchison's letter.

5580. Is not paragraph 25 substantially the same as paragraph 11, with the exception that it goes more fully into the matter?—Yes; it is an enlargement, apparently a recapitulation, with greater detail, of the general principle of paragraph 11.

5581. Therefore, there can be no doubt that both the Commissioners who signed that report, and the professors of the institution who considered, and I may say, suggested amendments in the report, agreed that that establishment should be strictly confined to a school of mining?—I never heard that there was any doubt of it.

5582. Are there any peculiar circumstances in your mind, that would justify a departure from that rule with regard to Ireland?—No; that was the feeling of the Commission; and also, I believe it is the opinion of the Department of Science and Art, that there is nothing peculiar in the position of Ireland, to require a different policy. The report made a certain compromise, and created a School of Agriculture in the Royal Dublin Society.

5583. The recommendation to establish a School of Agriculture in Dublin, while there is no such school in this country arose from the peculiar circumstances of the country, agriculture being its great industry?—Yes, it was a kind of compromise which was required from the position of affairs altogether.

5584. Do you see any objection to the establishment in Ireland of such a mining school as exists in this country, strictly defined in its object?—I should think that it would be scarcely advis-

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able to establish a large School of Mines in Ireland, when there is already one in London, which is not over filled. In Ireland, I think, it is not likely that you will have very many students in mining industry; and for those few it would be scarcely necessary to establish a great mining school on the principle of the Jermyn-street School. The pupils of such a school must necessarily belong to the middle classes and come from a distance; few, if any, are likely to be residents in the place, unless it were in the mining districts; it matters but little, therefore, whether they have to come to London or Dublin. It is another question whether it is advisable to continue a couple of already existing professorships bearing upon the subject; that may be considered, no doubt, advisable; but I think it very inadvisable, considering the smallness of the mining industry of Ireland to establish a large school on the basis of Jermyn-street, in that country, especially as it is always open to any place to establish a mining school under the general provisions of the Science Directory.

5585. There is a similar establishment connected with the Science and Art Department in Edinburgh, is there not?—There is no School of Mines in Edinburgh; there is simply an Industrial Museum in Scotland, without any professorship attached. Professor Allman, the Regius keeper of the Natural History Museum, is lecturer in the University, but there are no lectures connected with the Scotch Museum.

5586. I understand you distinctly to say, that the passages which I have called your attention to, confining the Institution in Jermyn-street to scientific education in mining exclusively, met with Sir Roderick Murchison's full support and approval, and that of the professors also?—Certainly; it was the strong advice of all the professors, as far as I am aware, from reading the Minutes of Evidence and from conversation, and there is the letter of Sir Roderick Murchison which I have quoted, in which no objection is made, though he was asked to make any remarks upon the subject.

5587. The Chairman puts this question to Sir Roderick Murchison: "It is stated in this report. As it is understood, that arrangements are likely to be made for retaining Archbishop Marsh's library, in connexion with St. Patrick's Cathedral, the rooms which have been appropriated for its use in the building recently erected for the National Gallery may, we hope, be used, at any rate for the present, for the Irish Geological Collection; and such portion of the remainder of the collections in the Museum of Irish Industry as it may be determined to keep, may be placed in the new Museum of the Royal Dublin Society. This consolidation should be made as a principle of careful selection. Only the best specimens of each class should be retained, and the duplicates should be given to the Museum of the Queen's College, or wherever else they may be of most use. To that passage you have a decided objection?" and the answer is, "To this consolidation;" do you consider that the word "consolidation" in the report refers to the consolidation of the Geological Survey Collection with the mineral collection in the possession of the Royal Dublin Society, or merely to the other objects now in the Museum of Irish Industry?—The word "consolidation" referred to the "remainder of the collections." It was never proposed to interfere with Sir Roderick Murchison's department at all.

5588. That was never contemplated by the report?—Not in the least; except so far as removing the collection from one house to the other.

5589. A union of the two collections was never contemplated?—Not in the least; the question of putting it under any other authority was never touched upon, nor the question of interfering with the Geological Survey. I think that Sir Roderick Murchison is aware, in fact I am sure that he was made aware that it was not intended to interfere with his duties with respect to the Geological survey.

5590. Do you know that portion of the National gallery building, which it was proposed to appropriate to Marsh's library?—Yes; I have plans of it here.

5591. What is the present vacant space in that building?—I have taken the dimensions out with the architect. There is a large separate entrance; there is a vestibule, 17 ft. by 9 ft.; there is a porter's room, 14 ft. by 10 ft.; there are two water closets and urinals; there is an office 25 ft. 6 in. by 15 ft.; there is another, 14 ft. by 15 ft.; there is a museum-room, with high side-light on both sides, 76 ft. 6 in. by 40 ft. 3 in.; there is a second museum-room, with high side-light on both sides, 46 ft. 6 in. by 40 ft. 3 in., deducting 90 feet for staircase, the total net museum space, not counting the vestibule, offices, and so on, is 4860 square feet.

5592. Have you had your attention called to the space which the collection at present occupies in the Museum of Irish Industry?—After hearing an answer with respect to it the other day, I took as good a plan as we have of it, from which it appears that the space in the gallery is something like 90 ft. by 22 ft. Taking it at 100 ft. by 23 ft., would give 2300 square feet; so that the space allotted for Marsh's library would give a good deal more than twice the space at present occupied by the collection, besides being much more convenient in the way of having more office space.

5593. There would be more office space in the proposed site, than there is at present in Stephen's-green?—Yes; there is one Geological Survey office, and I think that they keep their maps in the map and accountant's office. This would give them two offices, a porter's room, a vestibule, and so on, and a separate entrance.

5594. Is it your opinion on the mere question of space, that the locality allotted for Marsh's library, being part of the building erected for the National gallery, would give more than double the space, in fact, for the display and preservation of the Geological Survey Collection, than that collection occupies at present in the Museum of Irish Industry?—Yes; besides which you can extend these buildings to any reasonable extent (*pointing to the plan*). This is the back, and you may extend in this direction if required.

5595. More than double the amount of space would be given in the proposed new site than exists in the other?—Yes, there is more than double the amount of space already with the same kind of lighting.

5596. Sir Roderick Murchison objected to this proposed site, on the ground that it would be necessary to have side-lighting, which would waste a great deal of wall space; how is the Museum

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of Irish Industry, where the collection is at present deposited, lighted?—From the sides only.

5597. Whatever objection, therefore, may exist with regard to side-lighting in one establishment exists as to the other?—Yes; I am not aware that there is any objection to side-lighting; it is generally considered the best kind of lighting for desk-cases, in which the specimens will be generally placed.

5598. Is not side-lighting generally considered by far the best as compared with top-lighting?—For desk-cases it is, for with top-lighting with a desk-case you see your own face instead of the fossil. For high-wall cases and pictures, the top-lighting would be best. The mode of lighting the geological collection of the British Museum is side-lighting.

5599. We have these facts, then, that the available space for the preservation and display of the Geological Collections in the proposed new site, recommended in your report, would have been more than double in extent that which the collection at present occupies in the Museum of Irish Industry?—Yes.

5600. And that, so far as the side-lighting goes, whether it is an advantage or a disadvantage, the same exists in the other institution also?—Yes.

5601. Is it not your opinion that the location of the Geological Collection in that space, originally designed for Marsh's Library, that locality being so convenient to the Museum of the Royal Dublin Society, where the Mineralogical Collection belonging to them would be located, would afford the greatest facility and advantage to students of geology to go from one to the other of these collections, comparing the one with the other?—I should think so, certainly. No doubt very soon that building will be connected with the main building by a corresponding arcade to the one on the other side, which would give a covered passage all the way round. If I may be allowed to revert to a question you asked with regard to taking the Geological Collections from under Sir Roderick Murchison's control, there is a paragraph in the Report of the Commission, at page 13, to this effect: "Though placed in the Museum of Irish Industry, they are, at all events while the survey is in progress, in charge solely of the officers of the Geological Survey."

5602. Did you contemplate removing them from that charge?—There is not a word said about putting them under anyone else's charge.

5603. The only object being a change of site, as being more convenient and, as it now turns out, greatly preferable to the one they at present occupy?—Yes, they are at present, as it were, in lodgings at the Museum of Irish Industry. For other reasons it was proposed to do away with the Museum of Irish Industry, and the Report suggested that there were other rooms to which they might be conveniently moved. With reference to the convenience of the rooms, and any question as to their arrangement, that would be a question for Sir Roderick Murchison to settle with the Science and Art Department, to whom was given, by the Report, the management of all the details in carrying out the recommendations, and, of course, the Geological Survey stood in that respect upon quite a different footing to the Royal Dublin Society. In dealing with the Royal Dublin Society, which was a private body, having rights of its own, we had to draw out a kind of treaty with them; whereas, the Geological Society was a branch of the Department's own action, which they would of course look after themselves.

5604. I am anxious to clear up this matter fully, because I find in question 1945 Mr. Jukes seems to have been of opinion that there was an intention of amalgamating the collection of the survey with some other collection; whereas, if I understand you correctly, the whole object was merely the transference of the locale in which the collection was to be deposited?—Certainly, that was all.

5605. Mr. Lowe's letter, from which Mr. Jukes appears to have formed that opinion, was to this effect: "That the portion of the Geological Collection which illustrates the Geological Survey, and it is nearly the whole of it, is now, and must be always, kept distinct, and, therefore, can be as well exhibited in one museum as the other." That does not, in your opinion, convey any expressed intention of mixing the two collections, and breaking up, in fact, the geological arrangement at present existing?—Not the least; in fact, it would be absurd to suppose that we suggested interfering with one branch of the Geological Survey. The Geoligical Survey in Ireland is only one branch of one large concern, the Geological Survey of the whole kingdom, and it would be absurd to suppose that we suggested interference with one small branch of it.

5606. Mr. *George.*] The removal of the collection from one locality to another could have no effect of that kind?—No.

5607. Sir *Edward Grogan.*] Would they be, in any shape whatever, under the control or direction of the Royal Dublin Society?—Not in the least; the Royal Dublin Society have no power, that I am aware of, over the National Gallery, except so far as they are ground landlords.

5608. That is the only control which the Royal Dublin Society either has or ever sought to have over that particular collection?—They have no control in the least, nor could they have any.

5609. It was not contemplated by your report to give them any?—No, we were not even suggesting putting the collection into a house over which the Royal Dublin Society had any control, they would have a separate entrance and be complete in themselves in their new rooms, which they are not now.

5610. Has the Royal Dublin Society at present any control whatever over the exhibition part of the building belonging to the National Gallery?—Not the least, except so far as they are ground landlords.

5611. In the same way, they would have no control over the other portion of that building if the Geological Survey Collection were deposited there, except in the same way that they have a claim for rent?—No.

5612. Some questions were put to Professor Jukes with regard to the value of the Museum of Irish Industry generally, and Professor Jukes expressed his opinion very distinctly that the cost of the annual instruction of five or six young men in the Museum of Irish Industry would be amply repaid to the nation in the course of years. I asked you a short time ago about the number of teachers that had been trained in that institution; do you concur in that opinion of Professor Jukes as to the general instruction of the pupils?—I do not think such an extravagant expenditure

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—it would be nearly a 1,000 *l.* a year apiece—could be justified, either for the training of teachers or the instruction of other young men whose interest it is to obtain the instruction for themselves; I should think the Estimates would not be often voted by the House of Commons if that were the result.

5613. Is not it the desire and the object of the department to give every facility for the instruction and teaching of scientific subjects to the young men of Ireland?—Yes.

5614. There is no desire to restrict or limit it, so long as too much expense is not entailed by it?—No, they have the full benefit of all the grants that are made for English or Scotch industrial classes, and something besides.

5615. But the thorough instruction of five or six young men, which, in Professor Juke's opinion, would fully repay the nation for the expenditure incurred would, in your opinion, be rather too costly a purchase?—I should say it would be an impracticable idea to suggest. I have not the slightest doubt, if you made it worth peoples' while either to give or to obtain such instruction (which you could do at a great deal less than the cost of such a training in the Museum of Irish Industry), it would soon be forthcoming in other places, you would get students fully as well instructed as they are at the Museum of Irish Industry.

5616. When you use the expression in other places, you mean outside and apart from the schools of the Museum of Irish Industry?—Yes; in the same way as we have found that, having made it worth the while of teachers to get their scientific instruction as teachers for schools, they manage in the country generally to get such instruction somehow or other.

5617. That instruction (at least, in the subject we are now principally directing our attention to, viz., mineralogical studies) must be acquired by means of museums; that is to say, museums are necessary to acquiring a full knowledge of geological subjects?—No doubt they are.

5618. Also, where the museum exists professors ought to co-exist?—No doubt, it may make the museum more useful; but whether it is right that the country should pay for professors wherever there are museums is another question.

5619. I put my question too broadly. What I mean is, where a valuable museum exists, if professors on any particular subject are to be established, the connection between the professors and the museum would naturally exist also?—Yes; no doubt the professor requires a museum to a great extent as an illustration of his lectures.

5620. That is to say, the museum assists the professor, and the professor points out the value of the museum and illustrates and explains it?—Yes, if there is the addition of a professor; but I believe it is generally considered that the curator of a museum is not necessarily the best person to lecture on the museum. A man may be a very good curator of a geological museum, for instance, without being a good, or the best, lecturer on that subject.

5621. Do you consider that in the establishment and arrangements of collections in museums, the first object should be to make them attractive to scientific men or to the public at large?—I think you should make them as attractive and as popular as you can to the public at large, at the same time (as you can very easily do) giving the scientific man every facility for his own studies.

5622. Am I correct in assuming that a museum, arranged exclusively according to the views and opinions of scientific gentlemen, would not be as attractive to the public at large as one arranged in a more natural order?—It is such a wide subject that I am hardly prepared to give an opinion upon it.

5623. Do not you conceive that it is desirable that museums should be so arranged as to induce as many of the public as possible to visit them?—Certainly, I think everything that can should be done in the way of site, hours of attendance, general facility for attendance, labelling of a popular and an easily understood character, in fact, everything that would make them of interest and attractive to the general public.

5624. Major *O'Reilly.*] Would you recommend their being opened on Sundays, after the hours of Divine Service?—Certainly; and in the evenings.

5625. Sir *Edward Grogan.*] The object of a museum is not only the storing and preservation of valuable specimens, whatever they may be, but to act as an aid to students and the public, which may arouse in them a desire for further knowledge?—I think, certainly, in a National Museum you should make it as popular, instructive, and attractive to the greatest number of people that you can.

5626. That, you consider, ought to be the primary object in the arrangement of a collection of that kind?—Yes.

5627. Rather than to arrange it in the most perfect scientific order for the benefit of scientific men?—I see no reason why both objects should not be met. Of course I am speaking without any technical acquaintance with many of the subjects, but I believe that a great number of specimens which are useful to scientific men, for instance, in a Natural History Collection, would not be necessarily interesting or instructive to the general public, and you might keep them apart and allow the general public to see all that is really necessary to interest or instruct them.

5628. A Question (1992) was put to Professor Jukes by the Chairman on the subject of Mr. Adderley's letter. Mr. Adderley says, in that letter: "I have no means of suggesting by what new arrangements a simplification of the institutions under consideration might be best effected, but I certainly left the Department fully convinced that it would be for the interests of the public that the Royal Dublin Society and Museum of Irish Industry, having now every provision in duplicate for the same objects, should be brought together, and made one, at least as far as the Treasury is concerned, with them. The double staff, double lectureships, double collections, double building and fitting grants, double services of all sorts, kept up by aid of national taxation for identical purposes on the same spot, cause an obvious waste of resources." Then the question is put by the Chairman, "Is that last paragraph correct in any of its assertions; first of all, is there a double staff?" The answer is, "No, certainly not; there is no double staff." Do you consider that those statements in Mr. Adderley's letter are erroneous?—No; I think certainly not. That description is not full enough to make it absolutely correct in every minute particular, but broadly I think it conveys the general

general facts of the case. For instance, as to double staff, there is undoubtedly a double staff as far as there is a staff at the two establishments; that is, taking the lectureships out of the question. When you say "double staff" and "double lectureships," the staff evidently is distinct from the lecturers. The staff of the Museum proper consists of a director, a curator, and a clerk and accountant, and all the attendants and servants and porters, whatever number they may be. If you have the two establishments, you have that double staff of the two Museums.

5629. Sir *Robert Peel.*] You think that expression does not go far enough?—I think, for instance, "double lectureships" is an expression that might be open to misapprehension.

5630. "Double staff," you think, is not open to misapprehension?—No; there is certainly a double staff.

5631. "Double lectureships," you think, is open to misapprehension?—Yes; they are not all double lectureships. For instance, if Mr. Adderley had been asked accurately to describe the exact positions of the two museums, as a witness, and was describing them to a person who knew nothing about them, and used the words "double lectureships," it would require some further explanation to show the exact circumstances of the case where they are not all double lectureships. I think there is a chemist, an agricultural chemist, and a laboratory chemist.

5632. Sir *Edward Grogan.*] With regard to the remainder of the statement, are there "double collections"?—There are double collections in the two museums.

5633. Major *O'Reilly.*] Are they double collections for identical purposes?—"Identical purposes" may be taken in two different senses. "Purposes" may mean, broadly, the general object, for instructional purposes, that is to say, for the purpose of industrial instruction generally, or it may be taken in a more restricted sense, the special scientific aim, referring to the technical scientific arrangements. The Geological Collections, for instance, are not similarly arranged, and therefore not for *identical purposes* in the latter sense; one is a biological arrangement, and the other is a stratigraphical arrangement. I should be sorry to say, however, whether Mr. Adderley had the one or the other "purpose" in view.

5634. Sir *Edward Grogan.*] Of course there are double building and fitting grants?—Certainly.

5635. Therefore, with reference to all those different heads alluded to in Mr. Adderley's letter, with the exception of the word "lectureships," you think he gives a correct description?—Yes.

5636. Mr. Adderley states that he had no papers before him or means of fully entering into the subject, and he gives the impression on his mind?—Mr. Adderley had no letters before him except the minute which I, as Secretary of the Commission, sent him by the wish of the Commissioners. The only paper I sent him over was the Treasury Minute appointing the Commission, and explaining the object of the Commission.

5637. Sir *Robert Peel.*] Had you any communication with him before you wrote that letter?—No; I wrote that letter when the Commission met in Dublin. It became a question as to who should be examined; and the Commission thought it right, as the question of the amalgamation originated with Mr. Adderley, that he should have an opportunity of expressing his opinion. I accordingly wrote the letter as the organ of the Commission, and I sent him a copy of the Treasury Minute to explain the state of the case.

5638. Sir *Edward Grogan.*] Does it appear to you that, considering that Mr. Adderley had been many years out of office, and had no means at hand of actually refreshing his memory on the details of the subjects referred to in your official communication, his description was substantially, in all respects, correct?—I think the letter broadly states the facts of the case. If Mr. Adderley had been going into the details of the position of the two institutions as a witness, he might possibly have given a more detailed description.

5639. *Chairman.*] Do you think the fact of Mr. Adderley having been a long time out of office could affect in any way the correctness of his letter?—It could not affect the correctness of his letter, but it might affect his recollection of the details.

5640. Sir *Edward Grogan.*] You have already conveyed to us that, from your intimate knowledge of the thing, you believe his letter does, substantially, accurately convey the state of the case?—No doubt he wrote as any person might write a short letter, in which he did not care about entering into the details, knowing the Commission was on the spot, and would have the full details of the subject brought exactly before them, giving simply the broad conclusions at which he had arrived; and I think the letter expresses fairly the state of the case.

5641. Sir *Robert Peel.*] Have you read the evidence given before the Committee?—In several cases it has been given to me to read, and I have heard some of it.

5642. Are you aware of the opinion expressed by Sir Roderick Murchison and Professor Jukes, for instance, with regard to those statements in Mr. Adderley's letter?—I suppose there is no doubt that there is a double staff, for instance; that cannot be a matter of opinion; there are two museums, and there are two staffs, and there are double fitting and building grants in the Estimates.

5643. Mr. *George.*] You think the expressions in Mr. Adderley's letter are substantially justified by the facts and circumstances of the case?—Yes, I think so.

5644. Sir *Edward Grogan.*] Was the Geological Survey Collection under the consideration and purview of the Commissioners when they made their report, or did they ignore it altogether; did they ignore the existence of the gentlemen in charge of that collection?—No; on the contrary, we suggested where it might be put. It was no part of our inquiry to inquire into the Geological Survey, but we suggested where the collection might be put, in the event of the Museum of Irish Industry being transferred.

5645. At Question 2007 Professor Jukes is asked, "Does it appear from the Report that the Commissioners ever considered the fact of the existence of the Geological Survey?" The answer is, "There is scarcely any mention of it in the report; they seem to have ignored our existence." Do you consider that correct?—I cannot see in what sense we could be considered to have ignored the existence of it, when we specifically give a suggestion where the

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collection may be placed in case certain events happened.

5646. Professor Jukes was examined a good deal in reference to his opinion as to the recommendations of the report, and the details of the report, and at 2097 Professor Jukes says: "The person who made this report knew very little about our institutions, either in London or Dublin; therefore I cannot say that I attach much authority to the statements in it. I do not know what is meant by 'mining industry.' If you include everything that may possibly come under the term 'mining industry,' it would comprise chemistry, mineralogy, machinery, physics, geology, palæontology, and the nature of rocks. Everything that is taught in our institution, namely, the practical application of geology to mining and other kindred pursuits, is necessary for instruction in mining. You could not have a school of mines without including all those branches of education that are given in the Jermyn-street Museum"?—May I see the question to which that is an answer? (*The question is handed to witness.*) The quotation from the Commissioners' Report, given in the question to which that is an answer, is the statement of an absolute fact, and I have read quotations from the Report on the School of Mines, and from Sir Roderick Murchison's letter, bearing out my statement. I do not see that sweeping assertions as to the ignorance of the Commission can alter facts. The question put to Professor Jukes was: "I will read a passage from the Commissioners' Report, page 29:—'One exception has been made in England to the general rule that the teachers of science are not to be retained on fixed salaries by the Government. Mining industry is considered to be of such an exceptional character, that a school of mines is supported by the Government in London, on the understanding that it is to be made as technical and self-supporting as possible." Does not that passage convey that the primary and principal and sole object, in the contemplation of the Government, of the establishment in Jermyn-street, which is the one referred to, was education in connexion with mines, and all the kindred sciences bearing upon it? To which the answer is: "The person who made this report knew very little about our institutions either in London or Dublin; therefore, I cannot say I attach much authority to the statements in it." That would lead me to suppose that he thought that quotation from the report was not correct, or else it is evading the question. He then goes on to state that he does not know what is meant by mining industry. The Professors at Jermyn-street had no such difficulty or in framing a course of study.

5647. You think that Professor Jukes was not justified in the answer he gave?—Certainly not. Professor Jukes, when he accused Sir Charles Trevelyan (who was on both Commissions) and Sir Richard Griffith and Lord Justice Blackburne of ignorance when he did not answer the question, seems to me to be rather going out of the way to call people names.

5648. Mr. *Waldron.*] You have, I believe, relations other than official ones with Ireland?—Yes.

5649. Possibly you know the reputation of some of the distinguished men there pretty well; perhaps you are aware that Lord Justice Blackburne has been successively Master of the Rolls, Chief Justice of the Queen's Bench, Lord Chancellor, and Lord Justice of Appeal, and that in every one of those positions he has shown judicial powers of the very highest order?—Yes, I know that.

5650. Do you think it is likely that he would allow his judicial mind to be biassed by the prejudices and jealousies attributed to him here in your hearing?—I should imagine not.

5651. You are, no doubt, acquainted with Sir Richard Griffith?—Yes.

5652. Perhaps you are aware that he has been for over 50 years a public servant in Ireland?—Yes.

5653. And that a great deal of the useful legislation which has of late years passed has been due very much to his great knowledge of the country and the people, high and low, in Ireland?—Yes.

5654. Do you think it is likely that he would allow himself to be biassed by prejudices of this kind, in coming to the decision he came to in that report?—Not at all, I should think.

5655. As to the other Commissioner, Sir Charles Trevelyan, I suppose nobody insinuates that he had a predilection for one society more than the other?—He went very carefully into the question when he was asked to undertake the Commission; I do not suppose before that he knew anything about them.

5656. Sir Richard Griffith, I believe, made the Geological Survey of Ireland before the Jermyn-street department was heard of?—Yes, I believe he commenced the Geological Survey.

5657. He published the geological map of Ireland, the great accuracy of which has been generally admitted?—Yes; I am not very well acquainted with the map, but I have seen it.

5658. Do you think there is anybody living more competent to give an opinion as to the proper arrangement of a geological or mineralogical collection than Sir Richard Griffith?—I think he would be very competent to do so. I am not prepared to say that he is the most competent; he would be able to give as good an opinion upon it as any person I know.

5659. It was not altogether oral evidence that the Commissioners had before them; they had documentary evidence, had they not?—All the correspondence and documents with regard to the formation and conduct of the establishments.

5660. Will you look at page 4 of the Return moved for by Mr. George Alexander Hamilton, with regard to the Museum of Irish Industry; does it appear from that, that from April in 1845 to March 1854, 23,255 *l.* of the public money was expended on the Museum of Irish Industry?—Yes, that is the total.

5661. Will you turn to page 8, No. 2, of the same Return, does it say there that no lectures had been given from the time of the first grant in 1845 up to the date of that Return in March or April 1854?—Yes.

5662. So far as the public were concerned, we may assume that no substantial return was given for that large sum of money?—I believe it amounts to that.

5663. Will you look at the continuation of that Return up to March of this year; does it appear from that that from 1854 to 1864 42,163 *l.* of the public money has been expended on the same institution?—Yes.

5664. And there was also 769 *l.* contributed by students in fees?—Yes.

5665. Does not it appear from page 5 of that Return

Return that the total number of students who came forward for examination was 529?—Yes.

5666. I think you have already said that you do not agree with Professor Jukes that the nation would be well compensated by four or five persons annually being well educated in science, for all this large outlay of public money?—I do not.

5667. It would appear that the 529 students whom we may take to be the result of the operations of the institution, would have cost the State 125 *l.* per head; do you consider if that be so, that it is a useful expenditure of the public money?—I think it is a very large expenditure of the public money for the training of the class of students who attend the Museum of Irish Industry; they are principally middle class students, who I think (and I believe I am not overstating the case when I say that Parliament considers, and always has considered) should pay for their own instruction; that has been the policy embodied in the recent Code of the Education Department, and in the Minutes of the Department of Science and Art, that the country should not be called upon to pay for the education of middle class students.

5668. Will you read from page 5 of the Papers, moved for by Mr. Cogan, that paragraph of the Treasury Minute, (*handing it to the Witness*)?—"My Lords cannot, therefore, arrive at his Excellency's conclusion, that the objects of the two institutions are essentially different, and could not be combined."

5669. The Lords of the Treasury in that adopt the idea of Mr. Adderley, do they not?—Yes.

5670. Now turn to the next page, Mr. Lowe's letter on the part of the Committee of Council, and read the passage I have marked?—"My Lords, therefore, fully concur in the conclusions of the Report, as to the advisability of amalgamation of the two museums, on the ground of public convenience and public economy, and cannot admit that the two institutions are essentially different."

5671. Is not that, on the part of the Lords of the Committee of Council, an adoption very much of Mr. Adderley's idea, too?—Yes, I think so.

5672. *Chairman.*] The objects contemplated by the Treasury Minute, dated July 1862, were three-fold, were they not; was not it directed towards obtaining increased economy, improving the constitution of the Royal Dublin Society, and settling the disputes that had arisen between the governors of the National Gallery and the Royal Dublin Society, with regard to the 100 *l.* a-year rent?—The first two were main objects of inquiry, but I am not aware that there was any dispute between the National Gallery Trustees and the Royal Dublin Society. The Royal Dublin Society stated that they were owed 100 *l.* a-year ground rent which they had not received. I believe that that was acknowledged by the Treasury, though the Treasury objected for sundry reasons to capitalize that rent. I am not aware of anything in the shape of a dispute.

5673. The main object (as defined by the Treasury Minutes of 1862) was to inquire into those three points?—Not into that last point, I think, I proposed in my report to capitalize the rent, but it was objected to by the Treasury.

5674. You recommend in your report that it should be capitalized?—Yes, I think it amounted to that; I am not quite sure that I precisely recommended it.

5675. Was that the report which you sent in, in December 1861?—Yes. December 1861 was the date of it.

5676. There is no instruction given in this Minute of 1862, with regard to any inquiry into the suppression of the Museum of Irish Industry, and handing over its collections to the Royal Dublin Society is there?—The passage which the Chairman gives me marked, and which is as follows: "It would be for the Commission to consider and report whether the public advantages which form the object of these two institutions, might not be more effectually attained by a simplification of arrangement, and whether at the same time a reduction in the permanent annual charge might not be effected, while the better working of both institutions, and the proper control of the superintending departments of government might likewise be more effectually provided for, does not directly propose the suppression of the Museum of Irish Industry."

5677. Does not the expression used in those instructions "the better working of both institutions," clearly refer to the maintenance of both?—That is the expression in that paragraph, certainly.

5678. Do not you think that if it had been intended that the inquiry should be hostile to the Museum of Irish Industry, the Lords of the Treasury would have given the directors and officers of that institution some formal notice of the issuing of that Commission?—I am not prepared to say what the Treasury do under circumstances of the same kind.

5679. Was not the Council of the Royal Dublin Society all along informed of the issuing of this Commission?—I think that they must have been informed at the time of the issuing of the Commission; I do not know when the Treasury wrote to inform the Royal Dublin Society of it, but I should imagine at the same time, that they wrote to Mr. Justice Blackburn and Sir Richard Griffith, to serve upon the Commission.

5680. Will you read that paragraph of the annual report of the Royal Dublin Society for the year 1862, and tell me if that communication, which is called a confidential communication, and which was sent by the Treasury to the Royal Dublin Society, had reference to this Commission (*handing it to the Witness*)?—Yes; this evidently referred to the letter received from the Treasury. I do not know the date of it.

5681. Consequently, the Royal Dublin Society and its Council were informed of the issuing of the Commisson, but the Museum of Irish Industry was not?—I am not aware that the Museum of Irish Industry was not. The letter would go from the Treasury.

5682. The Report of 1862 very seriously affected the Museum of Irish Industry, did it not?—Yes.

5683. Did Sir Robert Kane, as the Director of the Museum of Irish Industry, receive any formal notice of the sitting of that Commission?—The first formal notice that I know of that he had was during the time the Commission was sitting in Dublin; I wrote to him at the same time that I wrote to the other witnesses, with regard to coming to give evidence. That is the first notice that I am aware of.

5684. Was that a formal summons or a private note from you?—I think it was a formal official letter from me, but I do not remember clearly its exact

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exact form. It was what I wrote according to the wish of the Commission.

5685. An official letter, requesting Sir Robert Kane to be examined on the following day?—Stating that the Commission was sitting and that we should be glad of his evidence; I do not remember how far off the date of the letter was from that of the examination.

5686. The sittings were held within the walls of the Royal Dublin Society, from October the 2nd to October the 9th?—Yes; and I believe those were the dates.

5687. During that sitting, 17 persons were examined, all of whom were, at the time, members or officers of the Royal Dublin Society?—Yes, I believe so; I am not sure, without referring to the list.

5688. Are you aware that 16 of those witnesses bore office in the Society at the very time they were examined; that two of them were Vice-Presidents; that eight of them were members of the Council or upon Committees, and that six of them were professors, curators, and so on?—It was principally on those grounds that they were examined.

5689. I see that you examined the Professor of Agricultural Chemistry, the Assistant Secretary, the Director of the Natural History Museum, the Registrar and housekeeper, the Curator of the Botanical Gardens, and the Curator of the Agricultural Museum?—Yes.

5690. Were the Professors of physics, chemistry, botany, zoology, geology, the practical chemist, and the Curator of the Museum of Irish Industry, or the assistant chemist, called or examined before your Commission?—No.

5691. The Rev. Samuel Haughton was examined before your Commission, and he gave his opinion respecting the disposal and arrangement of the Geological Survey collections, did he not?—As far as I remember, there were some questions put to him about the geological collections. I do not remember whether he said anything about the survey collections.

5692. The Rev. Samuel Haughton said that he was of opinion "that the collections made by geological surveys ought not to be kept together, as geological survey collections; but should be sent to a public museum?—I see that that is his statement.

5693. Therefore, the Rev. Samuel Haughton was asked his opinion with regard to the Geological Survey; before your Commission, I presume?—I forget how it arose. I do not think the Rev. Samuel Haughton was asked a question with regard to the disposal of the Geological Survey collections.

5694. He volunteered the opinion?—I should imagine so. I do not think any question was ever asked with regard to anything touching at all on the Geological Survey collections. I think it very improbable that any such question would have been asked him. He may have misunderstood some other questions; I do not quite remember. He might have been asked, for instance, if it would not be an advantage to have the two collections (that is to say, the geological collection that is now in the Museum of Irish Industry and the collection that belongs to the Royal Dublin Society) placed close together, and this appears probable from the context, or rather the previous sentence.

5695. In fact, you do not exactly recollect how it came out?—No; I should imagine that that was the way in which it came out.

5696. It, however, stands upon record, does it not, that you have a witness who expresses an opinion upon the subject of the Geological Survey collection?—Yes.

5697. And there is also, I think, a passage in your report to which Sir Edward Grogan alluded, with regard to the place where those collections should in future be placed?—Yes.

5698. Was any intimation sent to the Director of the Geological Survey that there was to be an inquiry made into this matter?—No inquiry was made. It would have been rather unnecessary to bring Sir Roderick Murchison over, because one of the witnesses made a statement with regard to the Geological Survey collections.

5699. But when the question of removing those collections of the Geological Survey to another place arose, do not you think that some person connected with the Survey should have been asked some questions about the matter?—It was considered unnecessary and inadvisable for sundry reasons, more especially because the Geological Survey was part of the Department of Science and Art, which was to be charged with the carrying out of the recommendations. Of course, Sir Roderick Murchison has that standing in the Department that he would always be in a position to make any requirements of his own known.

5700. Professor Jukes is the local director of the Geological Survey, is he not?—Yes.

5701. He was not called?—He was not in Dublin, and it was considered unnecessary to send for him; I think, if I remember rightly, he was at the meeting of the British Association at the time.

4702. The lecture system was also dealt with in the report; some of the professors were to have their office abolished, and others were to be removed from the public service to the Royal Dublin Society; were any of those gentlemen called before the Commission to express their opinion with reference to the proposed change?—The Professor of Chemistry was not. I do not know that any of the others were that are abolished.

5703. Was any one of them examined before the Commission?—No (*referring to the Report*); neither the professor of physics, nor the professor of chemistry, nor the professor of geology, nor the analytical chemist.

5704. Major *O'Reilly.*] Was any one of them examined?—Not of those that are abolished. The agricultural chemist was examined, but those I have mentioned, whose offices were proposed to be done away with, were not examined.

5705. *Chairman.*] Was any witness called before you upon the subject of the National Gallery?—No.

5706. One of the recommendations in your report is to place the collections of the Geological Survey in the part of the structure intended for Marsh's Library?—Yes.

5707. Are you aware that the Act of Parliament which constitutes the National Gallery (the 17 & 18 Vict.) specially designates the two uses to which that building is to be applied, namely, to be a Gallery of Fine Arts, and a Public Library?—Yes.

5708. On the faith of the building being devoted to the purposes declared by the Legislature, and under a special sealed contract with the trustees, was not 5,800 *l.* contributed by the trustees of

of the Dargan Fund towards the building?—No. As far as I know of the matter, 2,500 *l.* of the Dargan Fund has gone to buy pictures and a statue of Mr. Dargan, and 2,500 *l.* was given to enlarge the Sculpture Gallery into a large hall, for the statue of Dargan, to be called the Dargan Hall. I do not think, in any way, any part of that 2,500 *l.* can be considered to have gone, in the slightest degree, towards Marsh's Library.

5709. Was not a portion of that 5,000 *l.* applied to the whole?—I do not think that it can be considered that the 2,500 *l.* went to build Marsh's Library at all.

5710. Did not it go to build a portion of the whole structure?—Yes. I have a copy of the Treasury Minute, in which the views that I have expressed seems to be borne out, and doubtless the Treasury were in a position to know the whole of the circumstances: "My Lords have reason to believe that the Trustees of Marsh's Library are now indisposed to move their library from its present locality; in which event, the building having been erected at the public expense, my Lords would propose to take the necessary steps to make it available for the purposes of the present Museum of Industry."

5711. Are their Lordships correct in speaking of the building as being erected entirely at the public expense?—I am not quite sure as to the 2,500 *l.* There is some arrangement made about enlarging the Sculpture Gallery of the National Gallery into a Dargan Hall.

5712. The Lords of the Treasury, in the Minute dated July 1862, speak of "two institutions in Dublin connected intimately with the subject-matter of the inquiry, the National Gallery now in progress of completion, and the Royal Hibernian Academy. The former of these institutions has been built on the premises belonging to the Royal Dublin Society, liable to a rent of 100 *l.* a year; and a question has been raised as to redemption of this rent by a grant, in order to purchase other premises contiguous to the Royal Dublin Society, as explained in Captain Donnelly's Report. Although erected entirely at the public expense, it is vested in Trustees by Act of Parliament." Is that a correct representation; is it erected entirely at the public expense?—As far as I know, the Dargan Committee gave 2,500 *l.* to do something in the way of enlarging the Sculpture Hall, which is to be made into a Dargan Hall; and therefore, if that was spent in the building, it was not built *entirely* at the Government expense.

5713. Mr. *Waldron.*] Would the building ever have been erected without a grant of public money?—No; I am not prepared to say that that 2,500 *l.* was spent on the building. The Treasury may be right, and I may be wrong; that is only my impression at the moment. I do not know how much out of that 2,500 *l.* goes for the statue of Dargan.

5714. *Chairman.*] Are you aware that there is a clause in the Act constituting the National Gallery, that the building, when finished, is to be handed over by the building trustees to the governors and guardians, for whom they are trustees, and who will thenceforward have the legal possession of it, and the power to regulate how it is to be used?—I believe that is so.

5715. Were the Governors and Guardians of the National Gallery, or were the Trustees of the Dargan Fund, asked their opinion about this transferring of the Geological Survey Collection to the apartments intended for Marsh's Library?—There was no evidence taken on the matter; there was some private conversation on the subject.

5716. Do not you think that it was rather a strong mode of procedure on the part of the Commission, to recommend an invasion of their premises without making any inquiry to ascertain whether that invasion was legal or expedient?—The Commission were quite aware that it would require another Act of Parliament. The whole of that proposal as to the removal of the collection was a suggestion, for which arrangements would have to be made by the Treasury afterwards.

5717. Would not it have been advisable to have ascertained from the Trustees of the National Gallery, and those other trustees, whether it would be expedient that the original intention of the Act of Parliament should be changed?—We knew that the original intention was going to be changed, inasmuch as Marsh's Library was not going there.

5718. Major *O'Reilly.*] Is there anything about Marsh's Library in the Act of Parliament?—Yes; it was not interfering with the National Gallery; it was simply making the suggestion as to the rooms built for Marsh's Library, knowing that Marsh's Library was not going there.

5719. Mr. *Waldron.*] Does not the expression in the Minute, that "my Lords would propose to take the necessary steps to make it available," refer to seeking for an Act of Parliament to legalise it?—That was thoroughly understood.

5720. Mr. *George.*] What was the total cost of the National Gallery?—I think something like 26,000 *l.*

5721. How much of that was contributed from private sources?—I believe the Dargan Committee gave 2,500 *l.*; I do not know how much, if any, of that goes to the statue, but certainly not more than that has gone to the building.

5722. Has there been any further sum than that 2,500 *l.*, for any purpose, contributed from private sources to the National Gallery?—Not that I am aware of.

5723. It was stated by Sir Richard Griffith that the 2,500 *l.* that was contributed by the Dargan Trustees was applied to the internal decorations of the building?—Yes. I think, as I have stated, it was to do something with the Sculpture Hall, to make it into a Dargan Hall; to make the sculpture gallery into a kind of commemorative gallery.

5724. In fact, 21,500 *l.* of the money that built the National Gallery was public money, which was expended in the entire external shell of the building, and in every other matter of decoration except what the 2,500 *l.* was applied to?—Yes. As regards the part intended for Marsh's Library; that is not complete yet, I believe.

5725. That is the underpart of the building?—Yes.

5726. The Government having contributed 21,500 *l.*, and 2,500 *l.* only coming from any private source, would it not warrant the passage that you have referred to with respect to the Government taking the necessary steps for the transfer of the Geological Survey Collection to the lower part of that building, that had been intended for Marsh's Library?—We considered that it was a very feasible suggestion to make, that the Treasury should take steps to do so.

5727. *Chairman.*] You did not examine either any

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any representative of the Governors and Guardians of the National Gallery, or any one of the Governors and Guardians of Marsh's Library, on the subject of the proposed change in the destination of that portion of the structure?—No, we did not.

5728. You inquired into the Royal Irish Academy, and some other scientific societies, did you not?—No; we did not inquire into them. The Treasury Letter, to which I have referred, enlarged the field of inquiry; but, for several reasons, it was considered advisable not to enter upon the inquiry.

5729. I see that there is a recommendation in the report, that the Royal Dublin Society should have an opportunity of making representations upon those other societies; did you arrive at that conclusion upon any evidence which you had taken?—It was a suggestion, rather than a recommendation, that there should be a kind of voluntary affiliation to that extent.

5730. It was a suggestion on the part of the Commissioners themselves, but not based upon any evidence?—No; all that the report says is, "Real public benefit would ensue from voluntary affiliation of this kind."

5731. With regard to the concluding paragraph of the report, I see the Commissioners state, "We were partly influenced by a variety of documentary information, as well as by our own knowledge of facts:" what is the exact meaning of that expression, "our own knowledge of facts;" is that an appeal to their own experience?—Not entirely; but to facts known to us from official correspondence and from personal inspection, &c. For instance, Sir Charles Trevelyan went very carefully through all the correspondence and all the reports made with regard to the two institutions, with which he was supplied from the Department and the Treasury. I had been through it all, and I believe the other Commissioners saw, if not all, the greater part of it.

5732. None of that documentary information has been published, has it?—No, except the minutes and letters that have been asked for in Parliament. There is a great mass of correspondence which has not been published, the ordinary official correspondence in the Department upon the subject.

5733. Do you recollect the case of any report being presented to Parliament by any Commission, in which report the Commissioners propose to influence the action of Parliament by appealing to documentary evidence of which they give no record, and to their own knowledge of facts which they take good care to keep to themselves?—I am not aware of any report of that kind. But I must also state that this was not a report to Parliament at all; this was a report to the Treasury.

5734. Sir *Edward Grogan.*] Who had those documents in their possession?—Many of them; it is a report to the Government department. It is the difference between reporting to a Government department, which has the correspondence, and reporting to Parliament, which has not.

5735. Might not this expression, "as well as by our own knowledge of facts," refer to the circumstance that the Lord Justice of Appeal and Sir Richard Griffith were themselves members of the Royal Dublin Society, and had a very full knowledge of all the circumstances connected with it?—Yes. Of course they would have a great deal of such knowledge; they were appointed in consequence of having such local information. The Treasury Minute states that they were appointed on account of their local knowledge.

5736. *Chairman.*] They are therefore referring to their own experience and knowledge, are they not?—Generally to the knowledge which the Commissioners have on the subject from other sources besides the evidence which they had taken and printed.

5737. Their own personal experience?—Yes; in the same way that any Government officer in his report is aided in his conclusions by his own knowledge and experience.

5738. Mr. *Waldron.*] Will you look at that extract from Sir Robert Kane's evidence before the Commission (*handing it to the Witness*)?—"The Government founded that other institution with a specific object, and I was induced to take charge of it. It has not attained the popularity which might have been wished, because it had to struggle with disadvantages and hostility."

5739. Might not that reasonably have been taken by the Commissioners to mean that, after 17 years of trial and experience, and after an expenditure of, say over 50,000*l.* of the public money, he had to admit that it was a failure?—I think it certainly amounted to this, that it had not succeeded so well as he had thought it would. I do not think it would be fair to say that it amounted to saying it was an absolute failure.

5740. *Chairman.*] In the year 1854, it was proposed by the Department of Science and Art, was it not, to relieve the Royal Dublin Society of its educational functions, and to create an industrial school in Stephen's Green?—Yes.

5741. The Department of Science and Art have changed their opinion with regard to the expediency of such a central college of technical instruction?—I can hardly say that the department have changed their opinion; I think that they have been obliged, if one may say so, to cut their coat according to their cloth; they have been obliged to take up a more modified policy, because Parliament has rendered that absolutely necessary. I could not say that the department has any objection to a central school of industry, but it is a sort of thing which Parliament is not inclined to vote money for.

5742. The opinion which Mr. Cole entertained in 1854 is still entertained by the Lord Lieutenant and the Irish Executive, as being the arrangement most conducive to the general advancement of scientific education in Ireland?—Yes.

5743. You were asked whether the Jermyn-street Museum was not, strictly, a school of mining, and you stated that it was. Though it is a school of mining, the teaching has a very considerable scope, has it not?—Yes; the Commission that inquired into the Geological Survey and School of Mines went into the question of how much of the instruction was necessary for mining education. They examined all the professors upon the subject, with regard to how much of their various branches of science were absolutely essential; and the Report of the Commission amounts to this: that mining, that is to say, the branches of science essential to a mining education, should be considered the regular instruction of the school, and there is a recommendation that that should be marked by the other instruction—the elementary and preparatory instruction in general science rendered necessary by the present want of preparatory knowledge of the pupils—being given in the evening.

5744. Sir

5744. Sir Roderick Murchison states, "The subjects that we do teach are mining, metallurgy, geology (properly so called), chemistry as a basis, physics, and natural history. All those branches of knowledge are taught respectively." Is that correct?—Yes.

5745. That would be a very considerable field of teaching, would it not, though still having reference to mining?—What was to be the instruction in the School of Mines was what the professors considered essential for a mining education; for instance, some branches of physics were considered essential for a mining education.

5746. Do you consider that the subjects taught at this moment in Jermyn-street exceed the legitimate limits of a school mining?—I am not prepared to say that they do or do not; it is a question for Sir Roderick Murchison and the professors to decide what is absolutely essential; to frame, in fact, a curriculum for the mining students, as is done for the medical student, or any other professional student.

5747. Still, if "mining, metallurgy, geology properly so called, chemistry as a basis, physics, and natural history" can be all taught in the School of Mines, that is a very considerable scope of teaching in science, is it not?—Yes.

5748. If a similar school was established in Stephen's Green, it would naturally have the same scope and the same extent of teaching?—No doubt. If you establish a School of Mines, very likely you might restrict it still more than at Jermyn-street. If it was considered right to establish a School of Mines in Dublin, no doubt all those branches of instruction would be taken in, all that were considered necessary for mining; but the instruction might be limited to specific points, and not go generally through the subject.

5749. You think it would be more limited than the present system of teaching in Jermyn-street?—I should think very likely; of course, all the subjects would have to be taken in; chemistry would have to come in, and so would physics.

5750. Mr. *George.*] You were asked by the Chairman whether the Commissioners who made this report to which we have been referring, examined before them the different professors of the Museum of Irish Industry, and you stated they had not. Have you read the evidence, or were you present at the examination of any of those professors before this Committee?—I was present a short time while one or two were examined, and I have been shown parts of the evidence of others.

5751. Has your opinion, which you gave as a Commissioner, been altered by any of the evidence that has been taken, as far as you know, before this Committee?—No; not at all. The evidence of the professors would amount to this: that certain things are useful for instruction, and no one would doubt that instruction in chemistry or instruction in any other subject was useful. The question is, whether it is to be given by the Science and Art Department administering certain Votes of Parliament.

5752. You remain, notwithstanding the evidence given by the professors of the Museum of Irish Industry before this Committee, of the same opinion as you were when you signed that Report in 1863?—Certainly; I see no reason why the instruction in Ireland should be on a different basis to that on which it is in England.

5753. Sir *Edward Grogan.*] The Museum of Irish Industry is a branch of the operations of your department in Ireland?—Yes.

5754. You are yourself an officer of that department?—Yes.

5755. Do not you, therefore, consider the Museum of Irish Industry itself to have been represented on the Commission?—No doubt I as an officer of the department, was, more or less, the representative of all branches of department on the Commission. I was appointed on the Commission as the representative of the department.

5756. Can any objection, therefore, be reasonably taken to the constitution of the Commission, because Sir Robert Kane or some professor of the institution was not on it?—It is difficult for me to express an opinion upon such a question; that is a question for the Treasury. They appointed what they thought a right and fair Commission.

5757. The Commission defined the objects of inquiry?—Yes.

5758. Did you or the other Commissioners think it part of your duty to inquire into what power or authority the Treasury, who issued these instructions, had?—No.

5759. It was no part of your duty to question whether they had the power of appropriating that part of the building called Marsh's Library, or not?—No, certainly not.

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(B.)

ROYAL DUBLIN SOCIETY.

MEMORANDUM.

Members' Subscriptions.

	£.	s.	d.		£.	s.	d.
1843: Admissions and Subscriptions - - - -	486	3	–	1854: Admissions and Subscriptions - - - -	1,484	14	–
1844 - ditto - ditto - -	551	5	–	1855 - ditto - ditto - -	769	–	–
1845 - ditto - ditto - -	486	3	–	1856 - ditto - ditto - -	1,062	12	–
1846 - ditto - ditto - -	635	5	–	1857 - ditto - ditto - -	1,219	1	–
1847 - ditto - ditto - -	630	–	–	1858 - ditto - ditto - -	1,397	11	–
1848 - ditto - ditto - -	596	8	–	1859 - ditto - ditto - -	1,541	8	–
1849 - ditto - ditto - -	437	17	–	1860 - ditto - ditto - -	1,269	7	–
1850 - ditto - ditto - -	719	–	–	1861 - ditto - ditto - -	1,234	16	–
1851 - ditto - ditto - -	684	12	–	1862 - ditto - ditto - -	1,346	2	–
1852 - ditto - ditto - -	714	–	–	1863 - ditto - ditto - -	1,056	6	–
1853 - ditto - ditto - -	1,772	8	–	1864 - ditto - ditto - -	1,351	7	–

(C.)

MEMORANDUM.

SUMMARY of SOCIETY'S FUNDS, exclusive of Parliamentary Grant.

Members' Subscriptions for nine years to 31st March 1864, amounted to 11,478 *l.* 10 *s.*
Averaging yearly, 1,275 *l.* 7 *s.* 9 *d.*

Miscellaneous and Departmental Receipts in nine years ended 31st March 1864, amounted to 28,658 *l.* 3 *s.*
Averaging yearly, 3,184 *l.* 4 *s.* 8 *d.*

Subscriptions.

Highest year, 1858–9 - - - -	£. 1,541	8	–
Lowest year, 1862–3 - - - - -	1,056	6	–

Miscellaneous Receipts.

Highest year, 1862–3 (the Art Exhibition)	£. 11,772	5	3
Lowest year, 1857–8 - - - -	1,201	15	2

App. No. 1.

INCOME of the ROYAL DUBLIN SOCIETY for Nine Years ending 31 March 1864, exclusive of the Annual Parliamentary Grant for General Purposes, and occasional Votes for Buildings and Repairs.

		Members' Admissions.	Miscellaneous Receipts.	Totals.
		£. s. d.	£. s. d.	£. s. d.
1855 – 6	Year ending 31 March 1856 -	1,062 12 –	1,570 7 11	2,632 19 11
1856 – 7	Ditto - ditto 1857 -	1,219 1 –	1,752 4 2	2,971 5 2
1857 – 8	Ditto - ditto 1858 -	1,397 11 –	1,201 15 2	2,599 6 2
1858 – 9	Ditto - ditto 1859 -	1,541 8 –	2,724 11 9	4,265 19 9
1859–60	Ditto - ditto 1860 -	1,269 7 –	1,874 14 11	3,144 1 11
1860 – 1	Ditto - ditto 1861 -	1,234 16 –	2,139 – 2	3,373 16 2
	Subscriptions to New Museum Building - - - - -	- - -	713 10 –	2,824 5 6
	Subscriptions for Agricultural Hall - - - - -	- - -	2,110 15 6	
1861 – 2	Year ending 31 March 1862 -	1,346 2 –	1,842 1 –	3,118 3 –
1862 – 3	Ditto - ditto - -	1,056 6 –	1,826 11 1	11,772 5 3
	Art Exhibition—same year -	- - -	8,889 8 2	
1863 – 4	Year ended 31 March 1864 -	1,351 7 –	2,013 3 8	3,364 10 8
	Total Members' Admissions -	11,478 10 –		
	Averaging yearly - - £.	1,275 7 9		
	Total Miscellaneous Receipts - - - - -		28,658 3 6	
	Averaging yearly - - - - £.		3,184 4 8	
	Combined Total of Members' Subscriptions, and Miscellaneous Receipts - - - - - - - - - -			40,136 13 6
	Averaging yearly - - - - - - - £.			4,459 12 6

(D.)

MEMORANDUM.

RECEIPTS at CATTLE SHOWS, from 1840 to 1863.

	Receipts.				Receipts.		
	£.	s.	d.		£.	s.	d.
1840 - - - - -	147	12	6	1852 - - - -	368	16	2
1841 - - - - -	142	19	–	1853 - - - -	524	8	9
1842 - - - - -	203	3	10	1854 - - - -	718	6	8
1843 - - - - -	182	3	6	1855 - - - -	814	8	6
1844 - - - - -	211	7	6	1856 - - - -	1,045	16	6
1845 - - - - -	238	3	–	1857 - - - -	651	13	10
1846 - - - - -	361	–	–	1858 - (2 shows) - -	1,192	10	6
1847 - - - - -	393	15	2	1859 - „ - -	1,219	3	–
1848 - - - - -	225	10	4	1860 - „ - -	1,269	3	–
1849 - - - - -	315	7	10	1861 - „ - -	1,511	–	3
1850 - - - - -	283	10	10	1862 - „ - -	1,428	–	–
1851 - - - - -	359	17	8	1863 - „ - -	1,217	5	7

one or two small papers since Dr. Petrie's great work on the Round Towers of Ireland; that was printed in 1845. Instead of works of that description there is a catalogue of antiquities which has come down from 1847 to the present year. There has been nothing else printed, except in the Proceedings.

5302. Has that arisen from their being no want of works of archæological interest, or from their being a want of funds?—They did not come before the Academy, that is all that I can say.

5303. Was the reason that they did not come before the Academy the fact, that persons were not of opinion that there would be sufficient funds available for such purposes?—No; I think there was a great apathy among antiquaries for many years up to the date of the compilation of the catalogue.

5304. You think that the compilation of the catalogue has awakened public attention very much to the subject of Irish antiquities?—Yes; both here and in other countries.

5305. Do you think that additional funds are required for the publication of papers on subjects of antiquarian interest in Ireland?—I think that additional funds are required for the working of the academy *in toto*. If funds are granted, I hope that we shall get our share; and even if they are not granted I think that we might get more than we do. What we get for the antiquarian section, which is the most popular, and the most in favour with casual visitors, from the circumstance of there being a good museum to look over, is this: Our grant for the purchase of antiquities, and for the preservation of those antiquities in the museum, and for their arrangement and care, and for their registration and publication through the means of that catalogue, has been since the 16th March 1857, only 68 *l.* 8 *s.* in each year, on the average.

5306. Besides that deficiency, do you consider that the department of antiquities requires assistance with respect to the museum?—We have nominally 50 *l.* a year, which comes as another grant before the academy; of that we spend sometimes more and sometimes less. The balance is not carried on from year to year, and our average annual expenditure for the last seven years has been 48 *l.* 10 *s.* In addition to that, we have the Treasure Trove Grant, which is said to be 100 *l.*, but which has never quite equalled that amount; but it has been of great benefit to the academy.

5307. Sir *Edward Grogan.*] How long is it since you had that?—About three years; it was a Grant made at the instance of Lord Talbot de Malahide, who has taken a great interest in the working of the Royal Irish Academy.

5308. *Chairman.*] Have you never fully expended that 100 *l.* of Treasure Trove Grant?—I think not; but occasions must arise when twice that sum would not pay for a single article which might be found.

5309. Mr. *George.*] Can you keep over from one year to another anything that you do not expend?—I cannot tell, but I hope so.

5310. Sir *Edward Grogan.*] Is there any antiquarian object that you know of to which that amount might be appropriated?—None, except the Tara brooch, which would be very interesting, and useful for us to have.

5311. *Chairman.*] And an object peculiarly adapted to your museum?—Peculiarly adapted to our museum; as we have a number of kindred articles in the collection in connection with which it would make up a series of ornamental developments classified down to the present day.

5312–14. Sir *Edward Grogan.*] Where is the Tara brooch now?—It is the property of Mr. Waterhouse. It was once brought to the Academy I understand, and we had no means of buying it, and no properly authorized officer to buy it. The price was very small, though I cannot state what it was.

5315. *Chairman.*] Your museum is constantly receiving additions, is it not?—It is constantly receiving additions from purchases, and articles procured under the Treasure Trove Grant, and from donations and deposits. We get many donations from noblemen and gentlemen, who have deposited articles of very great antiquarian and historical interest with us, such as The Cathach of the O'Donels, which contains a manuscript which the President of the Academy forgot, at the moment when he was examined, to mention to you. That, perhaps, is of still greater antiquity than any other manuscript. It is a copy of the Psalms, and is supposed to be of the time of St. Columbkill. The shrine in which it is contained is a very beautiful piece of workmanship, which belongs to the O'Donels, and which Sir Richard O'Donel has deposited in the Academy. Then there is the shrine of St. Patrick, which Dr. Stokes deposited; and later, there is the bell of St. Senan, which is called the Golden Bell of Burren.

5316. Sir *Edward Grogan.*] How are those things deposited?—On an authorised receipt from the Academy that they will be taken care of, and delivered up when demanded.

5317. *Chairman.*] Do you lend out your own collections?—Temporarily we do. Certain articles we lent last year to the Kensington Museum. The Cross of Cong was given us by the late Professor M'Cullogh; and then we got the Tara Torques by subscription, shortly after they were returned from Russia. Then we purchased the Dawson Collection, and so we went on. The Board of Works, and the Shannon Commissioners, and the Drainage Commissioners, have afforded us many valuable collections, which are specially interesting, because of the circumstances under which they were found being known, together with details which lend additional importance to them. Of course, if you buy articles from a pedlar, or a man who picks up things here and there, you cannot tell where he finds them, and the case is very different.

5318. You are greatly indebted to Lord Farnham, are you not?—We are greatly indebted to Lord Farnham. I should add that we have among our treasures the Domhnach Airgid, a silver shrine, containing a manuscript in vellum in sheets folded up, and known to be, (at least with respect to those parts which have been as yet examined,) a copy of the Gospels. There are four books of them. We may say that that is the oldest manuscript now in the Academy. It is popularly believed to have come down from the days of St. Patrick.

5319. Is your museum nearly full?—The present museum, as it stands, is nearly full; the room is only 40 feet square; and we have no cases or fittings; and the Board of Works

Sir *W. R. Wilde.*

23 Jun 1864.

are unable by the requirements of their office to supply us with anything except repairs, so that we have really no place for the articles that come in, and we are obliged to stow away the larger ones in the crypt beneath the library.

5320. May I ask what you mean by the larger articles?—I would mention, as an example, a boat carved out of a single piece of oak.

5321. Do you take casts of any remarkable objects?—We have casts. Some years ago I purchased a collection of casts at Mayence for the Royal Irish Academy, as illustrative of Irish antiquities; and the King of Denmark gave us a collection of casts from the Copenhagen Museum.

5322. You have at this moment, I understand, a room that would be perfectly fit for the museum, if it were only arranged?—The room which is proposed to the Academy is that about which you spoke to Dr. Graves. It is a very large room with several side lights, with a western and southern aspect, and possesses many other advantages which are not possessed by a museum lighted from the top, which cannot display objects of art in their fine details, especially metal works.

5323. Sir *Edward Grogan.*] Do you consider side lights preferable to lights coming from the roof?—For the particular objects which I have in view I do; where there is a fine piece of metal, which can be better inspected when standing upright than lying flat.

5324. You think that a good side light enables the observer more carefully to ascertain the beauties of such an object, than a light coming from the roof?—Yes.

5325. *Chairman.*] This museum has been stated to be the greatest Celtic museum in Europe?—No doubt it is the largest and truest, and the least affected by external influences.

5326. And very rapidly progressing in its accumulations?—Yes; it now contains about 9,500 specimens.

5327. The catalogue which has been published will, you think, attract very great attention to it, and will be the means of showing people the class of objects which naturally falls within the scope of your department?—Yes; it has not only told people what we have in our museum but it has, to a certain extent, told what Irish Archæology is, and what may be done in cataloguing illustratively very beautiful and delicate objects.

5328. That catalogue was set on foot in 1847?—Yes.

5329. Did you get any assistance yourself?—No, I did my part of the work gratuitously.

5330. What is the precise cost of that catalogue to the Academy?—I think about 300 *l.*; the printing of the book has cost about 700 *l.* The arrangement of the museum, which of course should be done before there is any registration or numbering of articles, or writing of the catalogue, cost 113 *l.* 6 *s.* 8 *d.* A great number of the woodcuts for all parts of the catalogue were drawn, and of those we have a considerable number still remaining to the value of about 68 *l.*; and we have about 12 *l.* or 14 *l.* in hand. On the other side, the grant by the Academy was 300 *l.*; subscriptions, 162 *l.*; Government Grant, 200 *l.* I paid a small sum of 12 *l.* 17 *s.* 6 *d.*; and, I believe, that the sales amount to about 240 *l.*

5331. Then you were out of pocket about 12 *l.* for the revision of the catalogue?—Yes.

5332. There is a considerable portion of the contents of the museum which is as yet uncatalogued, is there not?—Yes; articles of stone, and earth, and timber, and bronze, and gold have all been described, catalogued, and illustrated; but articles of silver, which are very interesting, and all the large articles of iron, and all the collections called "finds," and all the articles which have come into the Academy of various descriptions since 1857 until now; and all the ecclesiastical remains, which are of great value and importance, and very beautiful and delicate, and highly illustrative of Irish antiquities, require to be catalogued.

5333. What is the estimated cost of the completion of that catalogue?—It could be done for several sums that might be mentioned; but to do it in the style in which it ought to be done would cost between 400 *l.* and 500 *l.*

5334. Have you anything more to say on the subject of the catalogue?—I think that the catalogue has been a popular work; I think that it has done the Academy good service; it has been the most paying book that they have ever published; the sales are still going on. When the work is perfect, which it will be when the fourth part continuing the second volume is brought out, I believe that it will be all soon sold off, and then it will not only repay, and more than repay the Academy Grant, but it will also bring in an income to the Academy or to the antiquarian section of it, for the benefit of the museum.

5335. Mr. *Waldron.*] That catalogue is largely illustrated, is it not?—It is illustrated at present with 630 woodcuts.

5336. Those woodcuts being very carefully drawn, I believe?—Very carefully drawn, and drawn by gentlemen who are not only good artists, but who are also antiquaries. Mr. Wakeman being one and Mr. Dunoyer another, one of whom is a member of the Academy, and the other has published a valuable archæological work. I think, that if the catalogue was completed it would be of great benefit to Irish archæology generally, and teach the country, and particularly the country gentlemen, the value to be attached to these things.

5337. Sir *Edward Grogan.*] Is all the letterpress of that additional part of the catalogue completed?—Part of the registration is; but of the writing to the silver only a very small part is completed.

5338. *Chairman.*] Has the Academy funds to carry out the remainder of that catalogue?—No; we have funds to the amount of 12 *l.* or 14 *l.*, and whatever the sales for the year may be; perhaps they may be 20 *l.* or 30 *l.*

5339. Are you of opinion that the museum requires a director, whose attention should be specially applied to it, and it alone?—As the president made some observations before the Committee, it is right that I should, on the part of the committee of antiquities, lay before the Committee a printed document, which is of the same class as that which the president laid before them, and by which they will perceive that we recommend a number of subjects for the consideration of this Committee; the completion of the catalogue, the investigation of existing monuments of antiquity, the extension of the museum, the purchase of British and foreign publications on antiquities, the purchase of British and foreign manuscripts connected with Irish history, the employment

employment of a competent scholar to complete the descriptive catalogue of the Academy manuscripts, the establishment of a foundation in connexion with the Academy, for a qualified Irish scholar, and other matters of that description. In addition, I would suggest the propriety of having a museum porter, because we have objects of very great interest there, which might be injured, as we know has happened sometimes in the British Museum, from various causes, and who would also be the person to show the museum, and explain it to persons coming in either as visitors or otherwise. I would have the whole of the museum under the care of a director, who would, like the librarian or the secretary, devote himself to his own particular object, and be a permanent officer of the council, but at present Mr. Clibborn, who is the curator, is not a member of the Academy at all, but merely an officer.

5340. Are you of opinion that the museum should be open to the public on Sundays?—I am of opinion that it should be open to the public every day.

5341. You think that it is a sight that intelligent artizans will take to?—Just as well as the Botanical Gardens, or any other place of resort for health, instruction, or amusement.

5342. Mr. *George.*] Would not that require a largely increased staff?—We could not do without that. If we had the museum removed to the upper room of which we spoke, it would be impossible ever to do it without a proper officer.

5343. *Chairman.*] We have heard of the bequest of Mr. Cunningham, a bequest of 1,000*l.*, which was to have been given for the purposes of premiums on essays on subjects of public interest?—Yes; it was for premiums to be given for works either printed in Ireland, or connected with Irish subjects.

5344. Was there any provision made for the distribution of medals in that bequest?—You have before you, in the Proceedings, a report of the committee of the Academy, in which the whole circumstances are stated, and a full account of the bequest given.

5345. Mr. *George.*] Can you give an estimate of the sum which you think would be required to place the different branches of the Academy in a state of efficiency?—Yes; I think that at the least one thousand pounds (1,000*l.*) per annum, in addition to the present Parliamentary Grant, would be requisite; and this sum, I am of opinion, should be equally allocated annually among the three departments of the Academy, viz., science, polite literature, and antiquities. I also think their respective balances, if any, should be carried over to their credit from year to year.

5346. *Chairman.*] It appears from this report of the proceedings of the Royal Irish Academy, published in the year 1861, there are medals given under the Cunningham bequest, to be distributed in the different departments, has the distribution of those medals been irregular?—Yes; it has sometimes lapsed for two triennial periods.

5347. Those medals are distributable every three years?—Every three years. The distribution ought to be inquired into according to our bye-laws, at the first meeting after the annual meeting on the 16th of March; but nothing whatever has been done on the subject, though this is the triennial period when it ought to be done.

5348. Do you find that the action of the committees differs with regard to the distribution of medals; for instance, are they more careful to distribute the medals in one department than in another?—I think the committee of science seem to have less hesitation, and more cordiality among themselves, in giving their medals, than the committee of antiquities; perhaps they know the men and their writings better than the others do.

5349. Can you inform the Committee what is the cause of this irregularity in the distribution of the medals?—Sometimes there has not been a work of sufficient merit produced within the time, and many other courses have possibly operated.

5350. The last allocation of medals before this year was in 1861, was it not?—Yes.

5351. How many medals were distributed in the Science Department then?—Two medals; there were also two at the preceding triennial period.

5352. Was any medal given in the Department of Antiquities in 1861?—There was no medal given by the council.

5353. Under what circumstances was that?—There was a difficulty in getting a quorum of members out of the seven who form the committee of antiquities, irrespective of the president, who is, *ex officio*, a member; and though they were summoned several times, notification being given to them what the subject to be brought forward was to be, they did not meet to allocate the medal until the president joined with the two members, who did meet each of the three times.

5354. Did they allocate the medal then?—Yes.

5355. To whom?—To me.

5356. Did you accept that medal?—No.

5357. Why?—I did not think, and many of my friends did not think, under the circumstances, of only two out of the seven being got to attend, though summoned three times for the purpose, that I could regard it as an honour, and so I declined to receive it.

5358. Has nothing been done this year with respect to the medals?—Nothing.

5359. Has there been no motion made for the distribution of any medal in the Antiquities Department?—Not that I know of; and I am a constant attendant at the council.

5360. I presume that you know the reason why this irregularity prevails?—It was the duty of the officers of the Academy to mention the circumstance, to summon the members specially for it, to move the various committees to it, and to have lists drawn up of any books that might have appeared during the six years. Any book appearing during the six previous years may get a medal in each of the three Departments of Science, Polite Literature, and Antiquities, and that adjudication is to take place (with adjournments) upon the first meeting after the meeting on the 16th of March.

5361. That adjudication may still take place, may it not?—Yes, certainly; but it would not be in accordance with the bye-law.

5362. Is it owing to any unwillingness to give the medal, or is it owing to mere carelessness, that it has not been given?—I cannot tell.

5363. You have taken considerable interest, I think, in matters connected with veterinary science?—I have paid some attention to it.

5364. Are you of opinion that the establishment of a school of veterinary instruction is a matter of great importance in Ireland?—I think it of very great importance. I remember at one time lectures were given on the subject at the

Sir R. Kane. 23 June 1854.

Royal Dublin Society (where there is a very good veterinary collection) by a most eloquent and a most scientific man. Such instruction would be most useful. And, in a country like Ireland, where we depend so much on cattle, and where we have so many epizootic diseases affecting our cattle, it is of great importance to have a school in which to teach herds as well as farriers, and to educate a class of veterinary practitioners, who would be distributed throughout the country, where there is great want of information of that kind. Feeling this, I joined Lord Talbot de Malahide some years ago in holding a meeting at the Mansion House, in Dublin, and made some observations, which were printed, at the time. We were unable to carry out that scheme at the time for want of sufficient funds, the Royal Dublin Society not having the means and appliances of seconding our wishes; but I still hope to see it carried out, as I think no other institution is at this moment more required in the country.

5365. From your own knowledge of Ireland, are you of opinion that very great ignorance prevails with regard to the treatment of the diseases of horses and cattle?—Very great, indeed.

5366. As Ireland is every day more and more advancing towards a pastoral country, is it not more necessary that some such establishment as that of which we are speaking should be set on foot?—Certainly. The veterinary art is making considerable strides on the Continent, particularly in Holland; and we have had Parliamentary Inquiries set on foot with respect to its state there, the results of which are published in the Blue Books.

5367. Do you think that such a school of veterinary instruction would be properly connected with the Royal Dublin Society?—I think it is the very place for it, it being the great agricultural institution of the country.

5368. It is in connexion with country gentlemen scattered throughout Ireland, and therefore it would be peculiarly within its province?—Yes. Country gentlemen throughout Ireland, if such a school existed, might send their herds to be educated there, as they have done at schools and model farms. When they went back to the country, they would certainly be of great benefit to their neighbourhood.

5369. Is there any provision for taking photographs, on the part of the Royal Irish Academy, of the most remarkable Irish antiquities?—Some years ago it was proposed to photograph all our antiquities. The president of the Academy, then one of our secretaries, took a very lively interest in the subject; a considerable sum of money was granted, and the Board of Works fitted up a photographic house, which is still in existence at the top of the premises in Dawson-street, but it has never been made use of; we have no photographic apparatus, though we have the glass house, neither have we any photographer who would devote his time gratuitously to it among our members. We have had a great number of very valuable photographs presented to us by Mr. Tennyson.

5370. Photographs of antiquarian subjects?—Photographs of antiquarian subjects, both at home and abroad. We had some of our own done by him some years ago.

5371. There is no systematic photography of objects of antiquity in Ireland?—No; I propose, in case we should have the means of illustrating the ecclesiastical antiquities, to have photographs made in whole or in part of them, and then by a process now well known to artists, to have their details transferred to wood, and so engraved, as being not only a more perfect, but perhaps a somewhat cheaper process than merely drawing on the wood.

5372. Mr. *George.*] With reference to the Cunningham trust, do you think it is right or proper that this delay in the distribution of medals should take place?—No, I think quite the contrary.

5373. It is a trust reposed in the Society, to distribute those medals without delay, at the proper time?—Yes, the fund for distribution is the interest of 1,000 *l.* Former councils meddled a little with that fund, and replaced it by other funds. It has not been kept distinct; the history of it is given in the report, but the reporters do not recommend any mode by which those inconveniences could be remedied. I would suggest either that the medals be given regularly, or that the fund be allocated to some other useful purpose.

5374. Is there a power under the trust to allocate the fund to any other purpose than to medals?—It is a fund of 1,000 *l.* left to the Royal Irish Academy by Timothy Cunningham, lawyer in London, to be invested in public securities, and the interest of it to be given in premiums according to the will and bye-laws of the Royal Irish Academy; gold medals have been usually given.

5375. Are you of opinion that no needless or unnecessary delay or difficulty ought to be imposed upon the distribution of those medals or prizes, pursuant to the trusts of the will or instrument, whatever it may be?—If the trusts were carried out, it would be a great stimulus to persons to work.

5376. Why are they not carried out; has not the society power within itself to carry out those trusts?—They have not been carried out this year.

5377. Is there any real impediment or real reason why those trusts should not be carried out?—I do not know any reason.

5378. Is the reason this, that the persons who ought to do it, will not take the trouble to do it?—The committee of science have always carried them out fairly and justly, so far as regarded their own department.

5379. Are there other departments of the society that have a co-existing right to control the giving of those medals?—Yes; the committee of polite literature, and the committee of antiquities.

5380. Is there any jealousy between those bodies that prevents the distribution of the medals?—I cannot say.

5381. Sir *Edward Grogan.*] Do you mean that the three committees must concur in the distribution of the medals?—Each committee recommends one or two persons for a medal for such and such a book, or such and such a set of works; for instance, Dr. O'Donovan got it for a series of works. They recommend those persons to the council, with whom the gift absolutely rests, and they give the medal in full council to each of those parties.

5382. Mr. *George.*] Is it in the recommendation to the council that the delay or difficulty arises, or is it that the council do not act as quickly as they might in distributing the medals according to the recommendation of the committees?—

This

This year the committees were never summoned for the purpose; and therefore it did not come before the council.

5383. Are copies allowed to be made from the antiquities in the Museum of the Royal Irish Academy by jewellers or persons engaged in art manufactures who wish to copy them?—We have always granted such permission.

5384. Are the specimens of antiquities in your Museum imitated to a very great extent both in bog oak and other materials?—Yes; permission to make copies is always granted.

5385. Your antiquities I believe furnish some beautiful models which have been very generally used and greatly admired?—Yes; sometimes copies have been made without asking permission, and lately we passed a law that no articles should be allowed to be drawn from without permission.

5386. Is the Academy as a body in connection in any way with the Kilkenny Archæological Society?—No.

5387. You are a member of that body?—Yes; it is not associated with the Royal Irish Academy; we, as far as we can, foster all those kindred societies, and especially the Irish Archæological and Celtic Society, the books of which we keep for them, and the office of which society I may say, is at our premises.

5388. I speak of the Kilkenny and South-east Archæological Society?—It is a very useful society.

5389. Has it been the means of rescuing a great number of antiquities from destruction?—Yes; they have done a great deal in that way; and so did the Celtic Society, when it was originally formed. For instance, they caused to be restored the monuments which were injured at Lusk when the Ecclesiastical Commissioners were making some repairs at the old church there; and they also contributed largely to the preservation of the old monuments of St. Audöen's Church which had been sold to the contractor; and I think that if the Academy had the means, the Committee of Antiquities and the Council of the Academy ought to be, and would be, the most effective body to preserve, as far as it is in our power to preserve, the existing monuments throughout Ireland.

5390. Have they ever got copies of brasses or inscriptions?—Yes.

5391. In connexion with provincial bodies, like the Kilkenny Archæological Society, might not a great deal of good be done?—A great deal of good might be done in the preservation of existing monuments; but, also, a great deal of good might be done in the judicious opening and investigation of some of the old monuments, particularly of the Pagan period, which is done every day, I am sorry to say, in a most improper manner, and occasionally by a road-maker.

5392. For materials to use in road-making?—Yes.

5393. Your funds are at present wholly inadequate to assist in any of these useful objects?—We have nothing at all for the preservation or care of the Museum beyond the fact that we have a nominal curator (who has many other offices to perform) and a porter. We are only allowed 50 *l.* a year by the Academy for the purchase of antiquities.

5394. If the Government placed funds at the disposal of the Royal Irish Academy, and it was known that it had funds for the purchase of antiquities, a great number of useful and valuable matters, illustrative of antiquity, might be preserved, that are now destroyed and lost?—I am quite sure that making known the fact that we have the means, and were willing to purchase, would bring us a large supply.

5395. Matters now lost for the want of purchasers?—They do not come to us.

5396. The Kilkenny Archæological Society have acquired by donations, and sometimes by purchase, a large and valuable collection of local antiquities?—It is not very large, but it is a valuable collection.

5397. That collection has been the means of saving a great many things that would have been otherwise entirely lost?—I do not know whether they would not have come to us at the Royal Irish Academy, if there had not been a rival institution existing at Kilkenny; but I do not think anything of the kind is now eventually lost in Ireland.

5398. The knowledge of that society existing, and having funds arising from private contributions, has brought a great many of those matters to their museum?—Yes, and also the fact of their having a most influential and energetic secretary, Mr. Graves.

5399. If you had those resources on a larger scale, I need hardly ask you whether you think that corresponding effects would be produced?—I think that it would be a great benefit to the country, and give a great taste for the elucidation of our history, and the study of our monuments if we had the means of making excursions occasionally, of repairing monuments occasionally, and of opening them occasionally, and bringing away objects so as to have them exhibited properly at the Royal Irish Academy.

5400. Sir *Edward Grogan.*] Is it within your knowledge that the Government incurs any expenditure in the maintenance of old ruins and monuments in Great Britain?—I have heard that ancient ecclesiastical monuments in Scotland, and military monuments are preserved by the Government; but I have been also given to understand that they are upon Crown lands.

5401. Is there any similar expenditure on any Irish castles or other objects of antiquity?—Except Dublin Castle, I am not aware of anything of the kind that is preserved or repaired.

5402. Is it your opinion that the difference in the arrangements in the two countries may arise from those objects of antiquity being on Crown property in one country and not on Crown property in the other?—That is quite possible.

5403. Have you any doubt that some of the most remarkable ancient monuments of Ireland, are becoming year by year more dilapidated for want of funds to keep them in repair?—I know that some of them are so dilapidated that they will fall within a very few years, if not underpinned and repaired. I may mention the old Castle of Ballintubber, in the county Roscommon, which as a tower, is certainly as fine as that of Carnarvon. If that is not repaired in a few years, it must fall.

5404. Are you aware that considerable expense has been gone to on the part of the Government in putting Carnarvon Castle in a perfect state of preservation, and checking the process of decay?—Yes, I have heard so.

5405. Do you see any reason why a similar expenditure should not be incurred in Ireland, for the purpose of keeping similar old buildings and monuments

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monuments in a state of preservation?—I think it ought to be done by some one or other; we cannot do it, for we have no money.

5406. Are you of opinion that if the Academy were provided with sufficient funds, that would be a legitimate object of their expenditure?—Yes; they would have sufficient authority to influence the owners of those castles and other buildings to permit them to be repaired, though some perhaps would not like them to be touched.

5407. Do you think the owners of those old buildings would prefer to see them fall to ruin rather than to have them preserved for future generations?—Many would not like them to be interfered with, but the great bulk would no doubt like to have them taken care of.

5408. If such a grant were made, you think the Academy would be the proper hands to receive and administer it?—Undoubtedly.

The Rev. JOHN H. JELLETT, A.M., called in; and Examined.

Rev. J. H. Jellett, A.M.

5409. *Chairman.*] I THINK you have been for very many years a member of the Royal Irish Academy?—I have been a member a little more than 23 years, and for many years a member of the council.

5410. You are now one of the vice-presidents?—Yes.

5411. Have you turned your attention chiefly to the Scientific Department of the Academy?—I have. I have been a member of the committee of science now some years.

5412. We have heard a good deal about the antagonism that prevails between the Science and Antiquities Departments, do you think that antagonism may be described as disastrous?—No, I do not agree with that; if you asked me what the disastrous results were, I could not tell you; it is true that now and then we have a warm discussion, but it does not go beyond a warm discussion. I have never known any bad blood produced by it; and though of course each section is anxious to get a good share of the very small amount of money which we have to divide, yet, on the whole, I think that each section is disposed to do justice to the other; I cannot myself remember where, from the niggardliness of one section, any important object of the other section was defeated.

5413. You would not consider it advisable to divide the grant?—I would not. In the first instance I think you would find it exceedingly difficult to say how it should be divided, because a very great amount of our expenditure is common maintenance; for instance, house, and servants' salaries; all those things are in common, and you would find it exceedingly hard to know how much of the grant you should divide; even taking what is most special to the committee of antiquities, namely, the Museum, I do not think we should like to have it said that the Museum belonged to one section of the Academy. We regard the Museum as belonging to the whole Academy. We should not like if the support of the Museum came entirely from one section of the Academy, so that the Museum were to be considered as belonging to that section; and therefore I would not divide the grant.

5414. After providing for the expenses of the establishment, might not a certain proportion of the fund be put aside for scientific and another proportion for antiquities?—I should explain with regard to the Science Department, the only thing we really get at present, is what is devoted to printing; there is no special fund allocated to scientific purposes distinct from printing, as there is to the purchase of articles for the Museum. There is no fund allocated to the purchase of scientific instruments regularly, or anything of that sort; all we get is printing and illustration of papers.

5415. Would you have separate evenings for the reading of papers connected with the two departments, some evenings solely for papers on antiquarian subjects, and other evenings solely for papers upon scientific subjects?—I should say not; I am afraid that if you had that division, your audience would be occasionally rather thin; and with regard to the attention paid by the audience, I have read papers before the Royal Irish Academy upon scientific subjects, and I have no right to complain of the attention of my antiquarian friends. I think that they do attend, and I think that scientific men, though of course it is not their specialty, do pay attention to interesting antiquarian papers.

5416. Do not you think, if it were known beforehand that the papers to be read on a particular evening were to be purely scientific, that the scientific men who did not care very much about antiquities would be sure to come, and that in the same way, if an evening were appropriated to antiquarian subjects, the antiquarians who would not care much about science would be sure to attend?—I think it is probable that you would have a larger attendance of scientific men on a given evening, and a larger attendance of antiquarians on a given evening, but the entire audience would be considerably diminished. I doubt whether that would be advisable, I should not approve of it myself.

5417. I dare say you are of opinion that there is considerable advantage in the connexion between scientific men and the antiquarians?—I am, I think there is an advantage in it certainly.

5418. They mutually assist one another, and illustrate each other's studies?—Yes, in certain cases they do; for instance, with respect to the articles in the Museum; their mineralogical and chemical composition is an important thing to be ascertained. In such matters as those the scientific department assists the antiquities department. A remarkable instance occurred the other day, where science came to the aid of antiquity to settle a question about the battle of Clontarf, as to whether the old account of the Danes being drowned could be borne out by facts; and in order to settle that question it was important to calculate the height of the tide at the time of the battle of Clontarf, which was done, the result of which was to prove that there was water enough at the time to have drowned them. That is one instance of many in which science and antiquity mutually assist each other.

5419. Mr. *George.*] It is important sometimes to ascertain the composition of the specimens of ancient metal work, is it not?—Yes, certainly; the bronzes, for example; there science comes in and helps.

5420. *Chairman.*] What assistance is given to science

science by the Royal Irish Academy?—The only regular assistance which we are able to give at present is, to give to persons engaged in making original researches an opportunity for publishing the results of their investigations; and that we do in two ways; first, by having papers read before the Academy, and inviting discussion upon them, which often elicits important matters; and, secondly, by printing them. There are other ways in which we might assist if our funds allowed. It may be interesting to the Committee if I mention, that on one occasion we did deviate from our usual rule, of not allocating funds towards science except by printing, and instituted a series of tidal and meteorological observations round the coast of Ireland. Those were continued at very great expense to the Academy, for a period varying in the different stations, from 12 to 16 months, and the result is, that we have a body of observations on the tides, of which I do not think I speak with partiality when I say that it is the best body of observations that exists. We undertook the reduction of those observations, and were thereby enabled to solve a problem which had hitherto been unsolved, of the separation of the solar and lunar diurnal tides on the coast of Ireland. That problem had been up to that time unsolved, in consequence, simply, of there having been but a small number of observations made. I should mention to the Committee, in order to show in what way our observations went beyond those which had gone before, that formerly it used to be the custom to observe the time and height of high water and low water, but nothing else. We, on the contrary, when we undertook those observations, besides observing that for every day of the year, observed for four tides during each month the height of the tide at every 15 minutes; and the result of that accuracy of observation was, as I tell you, that we were enabled to separate the solar and lunar diurnal tides, which had not been done before.

5421. Sir *Edward Grogan.*] Had that separation of the solar and lunar tides been attempted to be arrived at in this country?—It was attempted by the Astronomer Royal, but he had not a sufficient body of observations to complete it, and, in fact, in his work on the tides he mentions as one of the desiderata, a system of observations something like ours, that is, observations something more than mere high and low water.

5422. Mr. *Waldron.*] At how many points were the observations taken?—They were originally intended to be taken at 12 points, but in one, as well as I remember, the tide gauge was carried away by a storm, so that they were taken then at 11 points round the coast of Ireland.

5423. Mr. *George.*] Were they all round Ireland?—All round Ireland. One was at Cushendall, another at Kingstown, another at Courtown, another, I think, at Dunmore, another at Castle Townsend, another at Cahirciveen, another at Kilrush, another at Killybegs, another at Bunown, and another at Rathmullan, and one at Portrush.

5424. Sir *Edward Grogan.*] These observations were carried on under the superintendence of your committee of science?—Yes.

5425. That is to say, by voluntary agency?—Yes.

5426. How was it that the Astronomer Royal was not able to carry on a sufficient number of observations, was it on account of deficiency of funds?—I do not know. The Astronomer Royal carried on his observations for only two months, and observations for two months were not sufficient; why they were only carried on for two months I cannot say, it is hard to suggest a reason why a scientific man discontinues any particular investigation, he may have had something more pressing to call him off. I happen to know privately that the Astronomer Royal expressed himself in high terms as to the value of the results obtained by the Royal Irish Academy.

5427. *Chairman.*] Have those operations of your Scientific Department cost you considerable sums of money?—They have cost us nearly 400 *l.* independently of printing. There was a large sum to be expended on instruments. Of course a supply of instruments for 12 stations would cost a good deal. Then, though we got a great deal of assistance from the Ballast Board, who allowed us to make use of the lighthouse men, we had to pay them; and in the reduction of the observations, calculators had to be paid. Besides what was voted by the Academy, there were also sums given by private subscription, at least I know of one. The reduction not being finished, the treasurer of the Academy subscribed 50 *l.* for the purpose of completing the reduction of the observations with regard to semi-diurnal tides.

5428. Mr. *George.*] Have those tidal observations been applied yet to any practical use, have the results been printed?—Yes. Of course they are to nautical men of very great practical use, as having a bearing upon the theory of tidal currents.

5429. Professor Haughton delivered, I think, at the Royal Dublin Society, a lecture giving an account of those observations, and giving some very interesting results with regard to tides on the east coast of Ireland?—He delivered two or three lectures, one to a number of nautical men in Liverpool, which excited a great deal of attention amongst them at the time.

5430. Did not he deliver an interesting and valuable lecture on the subject at one of the evening meetings of the Royal Dublin Society?—Yes, he did.

5431. Pointing out the remarkable fact, as proved by those observations, of there being no rise or fall of the tide at Courtown, one of the stations you speak of?—Yes

5432. I believe those observations proved that at that particular point of the Irish coast where the northern and southern tides meet, the tides are in equilibrium, and there is no perceptible tide?—Yes.

5433. *Chairman.*] Do you think that it would be advisable to extend the operations of the Academy in this direction?—I think it would be highly advisable. I may mention one point in which I think our operations might be very usefully extended, which is to have a more complete series of meteorological observations than we have. Those meteorological observations which were very valuable, were confined to the coast. If we had an equally complete series of observations at inland stations, it would be of great advantage.

5434. Sir *Edward Grogan.*] Do you mean observations of the fall of rain, and so on?—The fall of rain, the direction of the wind, the force of the wind; the temperature, the amount of vapour in the air, and so on.

5435. Is not it conceived that a very great difference indeed exists between the east and west coasts of Ireland in respect of those points?—A very great difference, indeed; the difference

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between the fall of rain in Galway and the fall of rain in Louth is very large.

5436. Your impression is that it would be a national benefit, and not a mere matter of scientific curiosity, that those distinctions should be investigated and recorded?—Yes, Ireland is in one respect an interesting country as regards the making of meteorological and tidal observations; we have the Atlantic weather on one side as well as the Channel weather on the other side; we have the Channel tide on one side of Ireland and the ocean tide on the other side of Ireland.

5437. Mr. *George.*] Do you happen to know whether Professor Haughton, in that lecture to which I refer, directed attention to the peculiar set of the tides from the English coast to the Irish coast which, in his opinion, cause, in some degree at all events, the frequent wrecks which occur upon the numerous banks upon the eastern coast?—He did.

5438. So that those scientific observations that were made at the expense of your society are likely to prove of very great practical good to the community at large, particularly to nautical people?—Certainly; when the reduction of the observations shall have been completed of the semi-diurnal tides, they will be of the greatest possible value, because, I should explain, that the observations of the semi-diurnal tides are, for practical matters, of very much more importance than the diurnal. What ordinary people call the tide is the semi-diurnal tide; the diurnal tide is the inequality that exists between two consecutive semi-diurnal tides, which is only obtainable by exact measurement; but what people are in the habit of, in rough parlance, calling the tide is the semi-diurnal tide; and, I think, as soon as those observations shall have been reduced, they will be of the greatest practical importance.

5439. Beneficial practical results may be expected to follow from the reduction of those observations?—Yes.

5440. You have not the means at the present moment of making available for the public those scientific researches?—We shall do it ultimately, from time to time. With regard to the tidal observations, they have been made, and all that remains to be done is to reduce them; we shall do that as quickly as we are able; but we are delayed in it from want of funds.

5441. Do you not consider that your having already expended so much of the funds of the society in making those preparations, gives you a very strong claim for assistance in making them useful to the public?—Undoubtedly.

5442. Sir *Edward Grogan.*] The objects that you have just referred to, are some of those points alluded to in the report of your council?—Yes.

5443. You have spoken of your expectation to complete the reduction of your tidal observations, and of the importance of those tidal observations to the commercial world at large; till that reduction of them is completed, the benefits that may be derived from them are lost to the public?—They are.

5444. Is not that an additional reason why some assistance should be given towards the completion of that work—The public can make very little of them till they are reduced.

5445. Mr. *George.*] Are they continued now?—No. The observations have been discontinued a long time; they went on only for from 12 to 16 months.

5446. What became of the tide gauges?—They are there still.

5447. Sir *Edward Grogan.*] In reference to the lectures delivered in the Academy, is a prospectus printed of the lecture about to be delivered?—Yes; we call them papers. A programme is printed, giving the title of the paper, and the name of the person who is to read it.

5448. Those papers are both scientific and antiquarian?—Yes.

5449. As they are delivered to an audience composed of both those sections of the Academy, a good attendance is probably obtained?—Yes.

5450. On that account, do you think it would be inadvisable to have separate nights devoted to the reading of papers on antiquities and papers on science respectively?—Yes, I think so. I think the audience would be too thin.

5451. I put some questions to Sir William Wilde as to the state of old buildings in the country. If a fund were appropriated to the purpose of keeping those old buildings in repair, do you think the Academy would be the proper hands to administer it?—I should say so. We think we comprise the best antiquarians in the country, and that there could not be a better agency for carrying out such a purpose.

5452. Would the Academy, in your opinion, willingly carry out that work?—I think so; I am answering for others, but I have no doubt the committee of antiquities would be glad to join in a work of that kind.

5453. You have stated that as regards that department which comes peculiarly within your province, they would be only too happy if funds were allotted for the purpose, to devote their time to making the observations which they have taken, available to the public, and also to undertake other observations; have you any doubt if means were given to the committee of antiquities, they would be equally disposed to devote their time to the preservation of those old buildings and monuments?—No.

5454. *Chairman.*] Your department requires assistance, does it not?—Yes; we are very much stinted in illustrating the papers that are furnished. With regard to printing, when a paper is passed, printing follows as a matter of course, but unfortunately we are not able to allow illustration to follow as a matter of course, we are obliged to keep a tolerably tight hand upon the amount of money expended in illustration. A paper on natural science, of which we have had a considerable increase lately, generally requires a great deal of illustration. The limited nature of our funds, I think, has had rather a tendency to discourage men from bringing very important papers on natural science before us. Though I cannot mention an instance where I knew that a paper was actually withheld on that account, yet it is well known that we have little money to spend in illustrating papers; upon that point we require assistance. I would also mention to the Committee another direction in which, if we had funds, they could be usefully expended; when an individual is engaged in scientific researches which require for carrying them out a good deal of expense, I think it would be desirable that such an individual should have the power of coming before the council of a society like the Royal Irish Academy and saying, "I am engaged in such-and-such researches, and I lay before you an account of them, so as to show that very probably beneficial results will follow, but I am deficient in

(E.)

STATEMENT of the EXPENDITURE of the ROYAL DUBLIN SOCIETY, for Year ended 31 March 1864.

	Salaries.	Wages, &c.	Compensations and Retiring Allowances.	Rents, Taxes, and Insurances.	Fuel and Light.	Furniture, Repairs, and Fitments.	Buildings Totals.	Prizes.	Contingencies, Books, Specimens, Apparatus, Chemicals.	Printing, Advertising, and Stationery.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Establishment - - -	615 – –	342 16 2	26 – –	351 13 1	216 10 2	352 18 11	–	- -	109 7 1	389 19 2
Botanic Gardens - - -	200 – –	- -	- -	160 15 3	185 19 3	- -	–	- -	418 – 3	—
Library - - - - -	290 – –	92 15 –	- -	- -	- -	- -	–	- -	577 18 8	—
Museum and Mineralogy -	400 – –	66 5 –	- -	- -	- -	100 – –	–	- -	75 11 5	—
Agricultural Museum and Hall	100 – –	6 15 –	- -	- -	- -	- -	–	- -	182 7 2	—
Agricultural Laboratory and Lecture Room.	150 – –	53 – –	- -	- -	- -	- -	–	1 9 2	30 10 8	—
School and Gallery of Art -	250 16 1	60 19 –	49 19 –	- -	24 18 7	- -	–	- -	74 15 7	—
Agricultural Exhibitions -	50 – –	6 15 –	- -	- -	- -	- -	–	233 5 –	1,628 16 1	—
Art and Manufactures Exhibitions.	- -	- -	- -	- -	- -	- -	–	- -	200 – –	—
Examinations for Certificates of Merit.	- -	- -	- -	- -	- -	- -	–	3 10 –	—	—

(F.)

ROYAL DUBLIN SOCIETY.

STATEMENT of the RENTS paid for Kildare-street and Botanic Garden.

RENTS, RATES, and INSURANCES on Society's Premises.

	£. s. d.	£. s. d.
ESTABLISHMENT:		
Year's Rent of Lawn to Earl of Pembroke - - - - -	277 7 8	
Ditto - Clare Lane Premises to Earl of Pembroke - -	5 – –	
		282 7 8
Pipe Water-rate, as at present struck - - - - - -	4 3 –	
Insurances on Buildings and Property - - - - - -	63 19 4	
		68 1 4
TOTAL - - - £.		350 9 –
BOTANIC GARDENS:		
Year's Rent to C. A. Carroll - - - for A. 5 r. 3 p. 27 - -	62 3 –	
Ditto - Ecclesiastical Commissioners „ 27 0 5 - -	52 16 5¾	
Ditto - Midland Railway Company - „ 1 0 37 - -	23 1 6	
Ditto - Dean of Christ Church, &c. - „ 1 2 33 - -	17 4 4	
		155 5 3¾
Rent-charge to Ecclesiastical Commissioners - - - -	- - -	3 3 7
Ditto - Rector of Glasnevin - - - - - -	- - -	4 13 9
TOTAL - - - £.		163 2 7¼

22 April 1864.

Henry C. White, Registrar.

NUMBERS Visiting the DEPARTMENTS of the ROYAL DUBLIN SOCIETY.

1854	107,179	1859	108,273
1855	108,873	1860	111,360
1856	137,401	1861, including Sundays	391,146
1857	123,702	1862	315,507
1858	150,363	1863	400,000
TOTAL	627,518	TOTAL	1,326,286

Average per Annum.

Five years, 1854–1858	125,503
Five years, 1855–1869	245,457

Appendix, No. 2.

App. No. 2.

PAPERS handed in by *W. E. Steele*, M.D., 2 June 1864.

ROYAL DUBLIN SOCIETY.

ESTIMATE of the SUMS that are necessary to Complete the different Departments of the ROYAL DUBLIN SOCIETY.

	£.	s.	d.	£.	s.	d.
Museum of Natural History				4,500	–	–*
Library, Fittings and Furniture:						
General Library	1,000	–	–			
Dr. Joly's Library	405	10	–			
				1,405	10	–
Botanical Gardens:						
Museum of Botany, and fittings for same	3,000	–	–			
Doubling the Conservatories	3,000	–	–			
Nursing and Propagating Houses	425	–	–			
Curator's residence (700 *l.*), and Apartments for Pupils (300 *l.*)	1,000	–	–			
Completing Palm House	230	–	–			
				7,655	–	–*
Agricultural Department				3,000	–	–
			£.	16,560	10	–

* These items are based chiefly on Estimates furnished by the Architect of the Board of Public Works.

ESTIMATE of the SUMS that will be required to Defray the EXPENSES of the ROYAL DUBLIN SOCIETY, for One Year, when the several Departments of the Society shall have been completed.

	Present Scale.			Proposed Scale.		
AGRICULTURE:	£.	s.	d.	£.	s.	d.
Professor's salary	150	–	–	200	–	–
Curator of Museum and Superintendent of Shows' salary	150	–	–	175	–	–
Laboratory porter's wages	52	–	–	52	–	–
Agricultural Museum porter's wages	26	–	–	26	–	–
„ Contingencies	62	–	–	62	–	–
„ „ (temporary)	120	–	–	—		
For Prizes at Shows (in aid)	187	–	–	187	–	–
For Laboratory expenses	28	–	–	50	–	–
For Assistant Chemist	–	–	–	100	–	–
£.	775	–	–	852	–	–

App. No 2

	Present Scale.	Proposed Scale.
Botanic Garden:	£. s. d.	£. s. d.
Curator's salary	200 – –	225 – –
Curator of Botanical Museum	– – –	75 – –
Rents	163 – –	163 – –
Labourer's wages, fuel, and incidents	983 – –	1,363 – –
Extra for Sunday opening	150 – –	150 – –
£.	1,496 – –	1,976 – –
Museum of Natural History:		
Director's salary	250 – –	300 – –
Professor of mineralogy and mining, and keeper of minerals	150 – –	200 – –
Porter's wages (three additional porters being required)	54 12 –	200 – –
Contingencies: purchase of specimens, outfit for lectures, and mineralogical expenses	195 8 –	550 – –
Two assistants (Museum)	– – –	250 – –
Taxidermist	– – –	100 – –
Retiring allowance to Dr. Scouler	– – –	100 – –
£.	650 – –	1,700 – –
Library:		
Librarian's salary	200 – –	200 – –
Clerk's ,,	90 – –	90 – –
Two porters' wages (two additional porters being required)	91 – –	200 – –
To purchase books, &c.	500 – –	1,500 – –
Incidental expenses	49 8 –	
£.	930 8 –	1,990 – –
Manufactures:		
Guarantee for occasional exhibitions £.	150 – –	300 – –
Establishment:		
Assistant Secretary's salary	300 – –	400 – –
Registrar and housekeeper's ditto	200 – –	300 – –
Secretary's clerk ditto	75 – –	120 – –
Registrar's ditto ditto	40 – –	60 – –
Hall porter's salary	52 – –	60 – –
Four porters (to be increased from 39 *l.* to 45 *l.*)	156 – –	180 – –
Two junior ditto (additional) at 39 *l.* each	– – –	78 – –
Three housemaids, at 24 *l.* 5 *s.* 4 *d.*	72 16 –	72 16 –
Three additional ditto (charwomen) at, say, 18 *l.* each	– – –	54 – –
Pensions to two late Masters of the School of Art	49 19 –	49 19 –
£.	945 15 –	1,374 15 –
Incidentals:		
Printing, stationery, and advertising	350 – –	450 – –
Fuel and light	182 – –	250 – –
Insurances *	57 – –	150 – –
Liveries (present staff of 12 porters), say, 9 *l.* each	80 – –	108 – –
Incidentals—house, sundries, and cleansing	33 17 –	100 – –
Additional liveries for new library porters and museum porters, say, six at 9 *l.*	– – –	54 – –
£.	702 17 –	1,112 – –

SUMMARY.

	Present Scale.	Proposed Scale.
	£. s. d.	£. s. d.
Agriculture	775 – –	852 – –
Botanic Gardens	1,496 – –	1,976 – –
Museum of Natural History	650 – –	1,700 – –
Library	930 8 –	1,990 – –
Manufactures	150 – –	300 – –
Establishment: Salary, Wages, &c.	945 15 –	1,374 15 –
Printing, Stationery, Advertising and Incidentals (including Premiums of Insurance, &c. &c.)	702 17 –	1,112 – –
Total £.	5,650 – –	9,304 15 –
Grant to Zoological Gardens	500 – –	500 – –

* The increase in Insurances is indispensable, as the Society have new buildings, and property in books, &c., &c., which are not covered by the present amount insured.

By Order of Council,
Wm. Edw. Steele, Assistant Secretary.

Appendix, No. 3.

App. No. 3.

PAPERS handed in by *W. E. Steele*, M.D., and referred to in his Evidence, 8 June 1864.

Chemico-Agricultural Department of the Royal Dublin Society.

RETURN of the Public Attendance, and of the Number of Registered Pupils who attended the Public Lectures on Agricultural Chemistry; also, of the Practical Pupils who worked in the Society's Laboratory, and the Number of both that Competed for Prizes at the Termination of the different Courses.

YEARS.	PUBLIC LECTURES.			LABORATORY COURSES.	
	Public Attendance.	Number of Registered Pupils.	Number Competing for Prizes.	Number of Practical Pupils.	Number Competing for Prizes.
1859	1,473	11	9	9	3
1860	1,865	8	8	10	3
1861	2,612	11	11	8	2
1862	2,004	12	12	13	9
1863	2,014	7	5	8	2
1864	1,917	7	7	Laboratory course to commence in October.	
Total -	11,885	56	52	48	19

Apartments and Accommodation of the Chemico-Agricultural Department.

The apartments especially belonging to this Department of the Society, are:—

1st. A Large General Laboratory.

2d. A Smaller Private Laboratory.

3d. A Room for Balances and other Delicate Apparatus.

4th. A Chemical Store-room.

The general laboratory is one of considerable size, being 35 feet 9 inches in length, 18 feet in breadth, and about 18 feet in height; it is fitted with a large table or working bench, furnished with drawers, presses, and stands of chemical re-agents; and supplied with gas and water, and made to accommodate 16 working pupils.

This laboratory might be easily made to accommodate at least about 25 pupils, if necessary; and besides other advantages it possesses, is that of opening into a very fine Lecture Theatre, which is a great convenience in the delivery of the public lectures given in this Society.

There is also a smaller private laboratory, about 21½ feet in length, by 15½ feet wide, and might, at a small expense, be made to accommodate eight or ten working pupils.

As to the other apartments, they are quite sufficient for the purposes for which they are intended.

(signed) *E. W. Davy*, M.B.,
Professor.

GROUND PLAN

—OF THE—

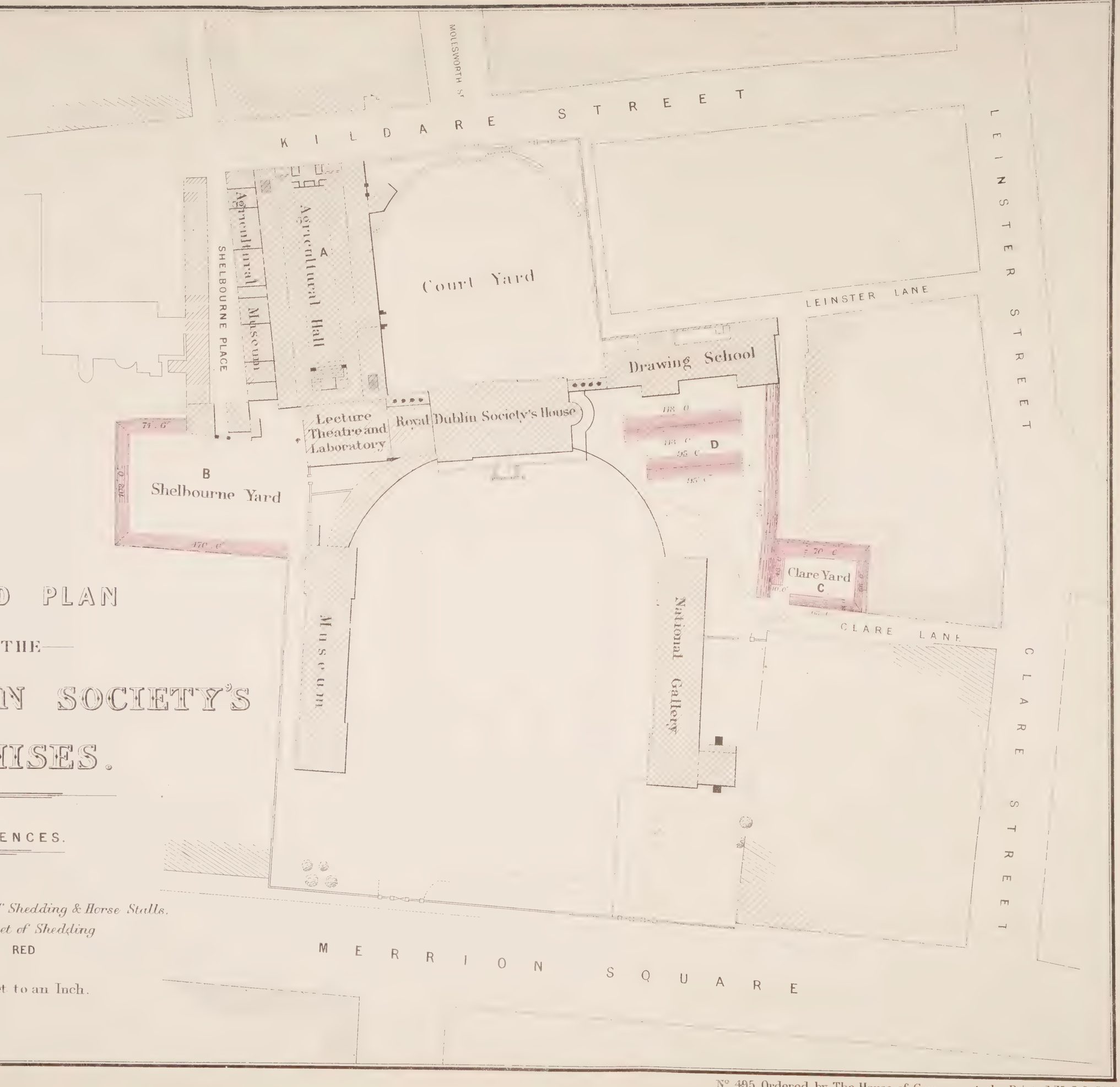
ROYAL DUBLIN SOCIETY'S PREMISES.

REFERENCES.

- A Agricultural Hall.
- B Shelbourne Yard.
- C Clare Yard. *242 feet of Shedding & Horse Stalls.*
- D New Yard. *with 640 feet of Shedding*

Colored RED

SCALE. 88 Feet to an Inch.



N° 495. Ordered, by The House of Commons, to be Printed, 15 July, 1864.

App. No. 3.

(Referred to in Q. 2875.)

Royal Dublin Society.

School of Art in connexion with the Department of Science and Art.

Head Master, Mr. *Edwin Lyne.*—Assistant Master, Mr. *James Healy.*—Art Mistress, Miss *Mary Julyan.*

The Royal Dublin Society offers the means of Instruction in the principles of Art, in the knowledge of its scientific principles, and in Elementary Drawing, to all classes in the city of Dublin.

The courses of instruction pursued in the School have for their object the systematic instruction, not only of Artisans and Teachers of Art, but also of Ladies and Gentlemen desirous of availing themselves of the opportunities of study afforded by the large and admirable collection of examples and models in the Society's Galleries.

There are two School Sessions in each year, of five months each. The First Session extends from 1st October to the last day of February; the Second Session, from 1st March to 31st July.

Vacations.—Good Friday, Easter week, Her Majesty's Birthday, All Hallows Eve, from Christmas Day to 8th January following, and the months of August and September.

Pupils studying in the Advanced and Technical Classes are admissible, without charge, to the Botanic Gardens, Glasnevin; the Natural History Museum; and, for the purposes of study, to the Gardens of the Royal Zoological Society, Phœnix Park.

Pupils of the School are eligible to compete for the Taylor Prize and Scholarship, the particulars of which may be ascertained at the School.

Students preparing for Examinations for admission into the Public Service can avail themselves of the instruction given in Geometrical and Mechanical Drawing and Perspective, on Tuesdays and Thursdays, from 10 o'clock A.M., to 12 o'clock.

Parochial and similar schools can obtain the attendance of a properly-qualified Art Teacher for one hour per week, at the rate of 6 *d.* per annum for each child taught, provided that not less than 40 children are placed under his instruction.

The Science and Art Department of the Committee of Council on Education offers the following advantage to Students of the School of Art:—

1. Prizes, consisting of Books, Cases of Instruments, Boxes of Colours, &c., for success in Examinations at the Annual Inspection of the School.

2. Medals and Medallions awarded for the best works executed in the course of study.

3. Local Scholarships, which entitle qualified Students to a gratuitous Art Education, and to certain payments, on condition that they assist in the instruction given by the Art Master.

4. National Scholarships, which entitle qualified Students to study in the Central Training in London for one year, with an allowance for maintenance.

5. Admission to the Training School for Teachers of Art in London, with a personal payment of from 5 *s.* to 25 *s.* per week.

Classes for Gentlemen.

Classes.	Time.	Fees. Entrance.	Fees. Monthly.	Fees. Session, 5 Months.	Course of Instruction.
		s. d.	*s. d.*	£. *s. d.*	
Drawing.	Mondays, 10–12 -	2 6	3 –	– 13 –	Drawing on the Blackboard; Model Drawing: Freehand Outline from Copies; Geometry; Perspective.
	Mondays and Wednesdays, 10–12.	2 6	5 –	1 2 6	Outline Drawing of Ornament and Figure from the Flat and Round; Flowers from Copies and Nature.
	Mondays, Wednesdays, and Fridays, 10–12.	2 6	7 –	1 10 –	Shading.—Ornament and Figure from the Flat and the Round.
Painting.	Tuesdays, 12–3 -	2 6	10 –	2 – –	Painting in Oil, Tempora, and Water Colours.—Figure, Landscape, Ornament; Still Life; Flowers and Fruit from the Flat and Nature; Modelling; Artistic Anatomy and Design.
	Tuesdays and Thursdays, 12–3.	2 6	15 –	3 – –	

App. No. 3.

Classes for Ladies.

Classes.	Time.	Fees. Entrance.	Fees. Monthly.	Fees. Session, 5 Months.	Course of Instruction.
		s. *d.*	*s.* *d.*	£. *s.* *d.*	
Drawing, Elementary.	Mondays, Tuesdays, and Thursdays, 12–2.	2 6	3 –	– 12 –	Drawing on the Blackboard; Freehand Outline of Ornament; Flowers; and the Figure from Flat Examples. Shading of Ornament and Flowers from Copies; Practical Geometry and Perspective.
	Mondays, 10–12 -	2 6	3 –	– 13 –	Drawing on the Blackboard; Model Drawing; Freehand Outline from Copies; Geometry; Perspective.
Drawing, Advanced.	Mondays and Wednesdays, 10–12.	2 6	5 –	1 2 6	Outline Drawing of Ornament and Figure from the Flat and Round; Flowers from Copies and Nature.
	Mondays, Wednesdays, and Fridays, 10–12.	2 6	7 –	1 10 –	Shading.—Ornament and Figure from the Flat and the Round.
Painting.	Tuesdays, 12–3 -	2 6	10 –	2 – –	Painting in Oil, Tempora, and Water Colours.—Figure, Landscape, Ornament; Still Life; Flowers and Fruit from the Flat and Nature; Modelling; Artistic Anatomy and Design.
	Tuesdays and Thursdays, 12–3.	2 6	15 –	3 – –	

Classes chiefly for Artisans, Persons in Training as Art and School Teachers, and Designers for Manufacturers.

Evening Male Classes.

Time.	Fees. Monthly.	Fees. Session, 5 Months.	Course of Instruction.
	s. *d.*	*s.* *d.*	
Mondays, Wednesdays, and Fridays, 7–9.	2 –	9 –	Drawing on the Blackboard; Model Drawing; Freehand Outline from Copies; Geometry; Perspective. Outline Drawing of Ornament and Figure from the Flat and Round; Flowers from Copies and Nature. Shading.—Ornament and Figure from the Flat and the Round. Painting in Monochrome of Ornament and the Figure.

Morning Male and Female Classes.

Time.	Fees. Monthly.	Fees. Session, 5 Months.	Course of Instruction.
	s. d.	*s. d.*	
Tuesdays and Thursdays, 8–10, A.M.	1 6	7 –	Drawing on the Blackboard; Model Drawing; Freehand Outline from Copies; Geometry; Perspective; Mechanical Drawing. Outline Drawing of Ornament and Figure from the Flat and Round; Flowers from Copies and Nature. Shading.— Ornament and Figure from the Flat and the Round; Time Drawing. Painting in Monochrome of Ornament and the Figure.

Special Classes for Architecture and Mechanical Drawing.

Time.	Fees. Monthly.	Fees. Session, 5 Months.	Course of Instruction.
	s. d.	*£. s. d.*	
Mondays and Wednesdays, 7–9, P.M.	3 –	– 12 6	Practical Geometry.—Plans, Elevations, and Sections of Buildings drawn to Scale, with constructive details.
Tuesdays and Thursdays, 10–12.	8 –	1 15 –	Mechanical Drawing.—Perspective.

Students desirous of attending all the classes, or wishing to continue at their studies during the whole time of the days proper to their schools (male or female), may do so on payment of the highest fee, viz., 3*l.* per session, or 15 *s.* per month; but they are to understand that no instruction can be had but at the proper hours appointed for the special study required.

☞ Students absent for one month to pay entrance fee on their return.

Students attending the classes from 10 until 3 o'clock in the day time, may also attend the morning female class from 8 to 10, or the male evening classes from 7 to 9 o'clock, on payment of the morning or night fees.

Lectures will be given in the course of the session by the Honorary Professors of Artistic Anatomy and of the Fine Arts.

Class Lectures on Practical Geometry, and Perspective, and Mechanical Drawing, will be delivered with a view to prepare students for the examination held by the Art Inspector in July.

For forms of admission, and information respecting the school, apply at the School of Art on every day, except Saturday, during the school hours.

(By order.)

Wm. Edw. Steele, M. D.,
Assistant Secretary.

Kildare-street, Dublin, April 1864.

App. No. 3.

ROYAL DUBLIN SOCIETY.

EXPENSES of SCHOOL of ART in 1863–4.

(Referred to in Q. 3877.)

	£.	s.	d.
Salaries of Masters and Clerk - - - - -	270	16	2
Servants' Wages - - - - - - - -	60	19	–
Fuel and Light - - - - - - - -	24	18	7
Incidentals - - - - - - - -	74	15	7
£.	431	9	4
Cr. By Students' Fees, &c. - - - - -	295	17	3
Balance Paid out of Society's Private Funds - - £.	135	12	1

(signed) *Henry C. White*,
Registrar.

(Referred to in Q. 2892.)

THE TAYLOR PRIZES and SCHOLARSHIP for the Promotion of the FINE ARTS in *Ireland*.

BY the will of George Archibald Taylor, Esq., late of Mespil Parade, Dublin, the sum of 2,000 *l.* was placed at the disposal of his executors for the promotion of Art in Ireland; and, in pursuance of his enlightened designs, it has been resolved to establish a perpetual endowment for the encouragement of students in the Fine Arts, according to the terms and conditions following:—

1. The general management of the scheme will be entrusted, in conjunction with the executors and trustees of the will for the time being, to the Royal Dublin Society, as joint trustees of the fund.

2. The fund will be invested in Government Stock to the credit of Charles Edward Bagot and Charles Leech (or other the trustees or trustee for the time being of said will), and of the Royal Dublin Society, and an account of its administration will be printed every year with the proceedings of the Society; but the fund shall at all times be kept separate and apart from the general funds of the Society.

3. The dividends of the fund will be applied, after providing for the necessary expenses of the trust, to the endowment of scholarships and money prizes, which will be open to all students of Art, of either sex, who shall have attended, for two years at least, a School of Art in Ireland; or who, being of Irish birth, shall have attended for the like period a School of Art in Great Britain or elsewhere, and who shall produce at the Exhibition hereinafter-mentioned Works of Art, displaying conspicuous merit or high promise of future excellence.

4. An annual exhibition will be held in Dublin, of the Works of Art, which shall be sent in for competition, and public notification will be given at least six months previously of the scholarships and prizes to be competed for, and of the regulations and conditions to be observed at such exhibition.

5. The proper subjects for competition will, from time to time, be defined and determined by the trustees.

6. The amount of the money prizes will be in the discretion of the trustees, having regard to the merit of the works exhibited; and when high artistic talent shall be manifested, one or more scholarships (to be called the Taylor Scholarship) of 20 *l.* or upwards, may be awarded, which may be held for a second and a third year, provided the student shall produce in each year a work of sufficient merit.

7. The prizes and scholarships will be withheld in whole or in part, when there shall not be adequate positive merit in the works exhibited; and the amount so reserved will be added to the principal of the fund.

8. The prizes and scholarships will be awarded upon the report of the judges, to be chosen as follows: The Council of the Royal Dublin Society will nominate one judge; the Royal Hibernian Academy, and the Governors and Guardians of the National Gallery of Ireland, shall each nominate one judge. Should either of the two latter institutions fail to announce the names of their representatives at least one week before the opening of the Exhibition, or, in the event of any of

of the judges so selected failing or being unable to act, the Royal Dublin Society, or, in the event of their failing to do so, the trustees of the will, will nominate one or more judges, so as to make up the number of three; and the three judges shall be at liberty, if they think proper, to call in one or two additional judges to assist them.

9. All the arrangements for carrying this scheme into operation, and all proposed alterations therein, shall in every case be subject to the approval of the trustees of the will for the time being.

The following regulations have also been adopted by the trustees :—

10. The works sent in for competition are not to be of less dimensions than the following :

Pictures in Oils.—The size of cloth, 29 inches by 36 inches.

Water Colour Drawings.—20 inches by 25 inches.

Compositions in Sculpture.—The figures to a scale not less than two feet; the models to be baked or cast in plaster.

Architectural Drawings to be as large as a whole sheet of double elephant; may be of exterior or interior; to be carefully finished and washed; and if of an existing building, to be from actual measurement.

The pictures need not be framed.

11. Each work must be accompanied by a brief description of the subject, and also by a statement of the name, age, and birthplace of the artist; of the place where he has studied, and where he shall at the time be actually a student; also a certificate of his having studied for two years at least, in some recognised School of Art; and proof must be given, if required, of the correctness of these particulars, and of the work sent in being actually the production of the party competing.

12. A prize in any one department cannot be obtained by the same student more than two years in succession.

13. Candidates for the scholarship must also be prepared to satisfy the trustees of their intention to devote themselves to Art as a profession. A student having obtained the scholarship, and desiring to retain it for a second or third year, must compete for it by a new work in the exhibition of each year.

14. Works sent in for competition may be detained a month, if required by the trustees. They will not be copied or sketched from, without the permission of the artist and of the trustees. They may be sold in the exhibition, if the artist wish.

15. They must be delivered at, and removed from, the place of exhibition, at the expense of the student exhibiting. The trustees will take all reasonable care of the works, but will not be answerable for accidental injury.

16. The judges will examine the works in a private view, and will make their adjudication in writing, with such remarks and recommendations as they may think proper to offer to the trustees. After the judges' private view, the exhibition will be opened to the public, on such terms and conditions as the trustees shall determine.

17. The trustees do not prescribe the precise subjects of the prize works, discrimination in the choice of a subject being regarded as, in some measure, a mark of artistic capability; neither do they put any limitation on the age of the competitors. But in the adjudication every circumstance will be considered with reference to the prime objects of the endowment, namely, the encouragement of the Schools of Art in Ireland, and the development of Irish talent; and the trustees reserve to themselves the absolute right of determining whether the party competing be strictly a student, and in other respects comes within the intention of the trust.

Communications on the subject of the Taylor Prizes and Scholarships may be addressed to Ralph B. Brunker, Esq., Solicitor the Executors, 31 York-street, Dublin; or to William Edward Steele, Esq., M.D., Assistant Secretary to the Royal Dublin Society.

Dublin, 31 March 1860.

(Referred to in Q. 2892.)

TAYLOR PRIZES for the Promotion of the FINE ARTS in *Ireland*, for the Year 1864.

THE trustees offer the following prizes, open to Art students of Irish birth or attending a School of Art in Ireland, to be awarded at an Exhibition to be held on the 23d November 1864, at the house of the Royal Dublin Society.

1. For the best drawing or cartoon in chalk, the figures to a scale of three feet (two or more prizes each) - - - - - - - - - - - - £. 10

[Subjects:—*The Good Samaritan; The Meeting of Æneas and Dido, after the Shipwreck.*]

2. For the best landscape in oil colours - - - - - - - - - £. 20

To be increased or lowered in amount, or wholly withheld, according to the merit of the works.

All works must be delivered before two o'clock on Saturday, 14th November 1864, at the house of the Royal Dublin Society, Kildare-street, Dublin, where the conditions and other particulars may be ascertained.

On behalf of the Trustees,
William Edward Steele, M.D.,
Assistant Secretary, Royal Dublin Society.

16th March 1864.

App. No. 3.

(Referred to in Q. 2905.)

DUBLIN SCHOOL OF ART, ROYAL DUBLIN SOCIETY.

RETURN of Attendance Fees, &c., for the Session commencing October 1.

Number attending since 1 October 1863.

Ladies' drawing class	91	Artisans' evening drawing and architectural	129
Ditto painting class	44	Artisans' morning class (female)	26
Gentlemen's morning drawing and architectural	39	Artisans' ditto (male)	12
Ditto painting	7		

Fees received each month since October 1863.

	£.	s.	d.		£.	s.	d.
October	47	10	–	February	25	13	6
November	36	15	9	March	60	16	6
December	15	19	6	April	58	5	6
January	15	9	–	May	41	1	2

Prizes awarded at Examination of October 1863.

Local medals	13	Honourable mention	2
Works selected for national competition	3	First grade prizes	48
		Second grade prizes	13

Prizes awarded at Examinations of Works in London, March 1864.

Local medals	20
Selected for national competition	10
Honourable mention	5

Examinations for first and second grade prizes will be held in October next.

James Lyne, Head Master.

MEMORANDUM relative to the Rent of the National Gallery, and the purchase of Shelbourne Yard.

(Referred to in Q. 2909.)

THE Act of Parliament, 17 & 18 Vict., c. 99, enacted that a National Gallery should be erected on the north side of Leinster Lawn, in the City of Dublin, the leasehold property of the Royal Society, under the management of certain Building Trustees named in the Act, viz., the Earl of Charlemont, Sir Richard Griffith, Bart., Major General Sir Thomas A. Larcom, K.C.B., Thomas Hutton, Esq., and George Roe, Esq., with power to treat with the Royal Dublin Society for a lease of a portion of Leinster Lawn, required for the building, and that the amount of the reserved rent payable for such lease should be approved of by the Board of Trade.

The Earl of Charlemont not being able to attend, in consequence of ill health, Sir Richard Griffith, acting as Chairman of the Building Trustees, entered into a negociation with the council of the Royal Dublin Society, and proposed that, as the portion of Leinster Lawn required for the purposes of the National Gallery, was equal to one-third of the whole area, that 100 *l.* per annum, being one-third of the rent paid for the Lawn by the Royal Dublin Society to the proprietor of the FitzWilliam Estate, should be fixed as the rent to be paid for the site.

The Royal Dublin Society having approved of Sir Richard Griffiths' proposal, a draft lease was prepared by the solicitor of the Society, which is forwarded to the Board of Trade, whose solicitor, having made some alterations, approved of it. Sir Richard Griffith having informed the council of the Royal Dublin Society that the particulars of the lease has been approved, on his application, possession of the site was formally handed over to him by one of the honorary secretaries of the Society, and the building of the National Gallery was immediately commenced and carried on without interruption.

Soon after the approval of the draft lease by the Board of Trade, the management of the Science and Art Department of that Board having been transferred to the Department of Science and Art at South Kensington, it became necessary to submit the draft lease to that Board, who, after retaining it a considerable time, approved of it by a written communication addressed by the secretary of the Board to Sir Richard Griffith, when a discussion arose as to the party who should pay the rent to the Royal Dublin Society.

In the meantime the National Gallery Building was erected on the site on the north side of Leinster Lawn, presenting a façade similar to that of the new museum of the Royal Dublin Society previously erected on the south side, and leaving a comparatively small portion of Leinster Lawn open between the east front of the Royal Dublin Society House and Merrion-square.

On the diminished portion of the Lawn thus remaining, the Royal Dublin Society were obliged to hold their annual exhibition of sheep, pigs, and implements, and machinery, as applied to agriculture, which previously extended over the whole area; but on the completion of the National Gallery Building, the portion left appeared both to the Royal Dublin Society and the public to be unsuited to such exhibitions, inasmuch as the grass and surface of the Lawn was annually broken up, and the walks destroyed by the erection of temporary buildings necessary for protecting the machinery from the weather, and also by the formation of temporary roads on which the locomotive steam engines, &c., could pass; and hence the Lawn ceased to present that cared-for and ornamental character suited to the beautiful public position

position which it occupied. Under these circumstances the council of the Royal Dublin Society, acting through a select committee of members, entered into a negociation with the tenant occupying certain premises adjoining those of the Royal Dublin Society on the west, called Shelbourne-yard, with a view to the purchase of his interest in leases of the premises for the purpose of holding their annual exhibition of implements and machinery applied to agriculture, &c., instead of Leinster Lawn. The negociation was carried on by the committee, headed by Sir Richard Griffith, who, after some time, offered the sum of 1,600 *l.* for the lease of the premises, which was declined, but subsequently, on the death of the leaseholder, the premises were offered for sale, and it being understood that several offers were made, some of which nearly amounted to 1,600 *l.*, the committee, through their chairman, again offered that sum, which was finally accepted. At this juncture, Mr. Cardwell, the then chief secretary for Ireland, suggested that the rent of 100 *l.*, payable for the ground occupied by the National Gallery, should be capitalised by the Treasury for the sum of 3,000 *l.*, to be expended in the purchase of Shelbourne-yard, viz., 1,600 *l.* in the purchase of the leasehold, and the remainder in the purchase of the head rents, amounting to 53 *l.* per annum; and an application to this effect was made to the Lords of the Treasury, but as the immediate payment of the 1,600 *l.* was necessary, the committee, already mentioned, obtained the loan of that sum, on their own responsibility, from the Bank of Ireland, and in consequence the society became possessed of the premises. At the same time, to relieve the committee from responsibility, a meeting took place of several of the members of the society interested in the improvement of agriculture, when a sum, considerably exceeding the sum borrowed, was guaranteed by each of the members writing down his name as security for a certain sum.

Upwards of three years having elapsed since the loan was obtained, and the purchase of the leases completed, during the month of February last, the secretary of the Bank of Ireland applied to Sir Richard Griffith, and the committee responsible for the loan, requiring them to pay the amount, but the committee, having had a personal communication with the governor of the bank, the repayment was postponed for six months.

Owing to the delay of the negociations so long in progress with the Government, the lease of the premises from the Royal Dublin Society has never been executed, notwithstanding which the whole of the dilapidated buildings which encumbered Sherbourne-yard have been pulled down, and the yard has been surrounded by a high wall and slated sheds, supported by cast-iron pillars, have been erected adjoining the wall, at a cost exceeding 1,000 *l.*, and three successful exhibitions of agricultural machinery and implements have been held there, the last being in the month of March of the present year.

It should be observed, that the sum of upwards of 1,000 *l.* has been expended by the Royal Dublin Society in rendering the Shelbourne-yard suited to hold these exhibitions, the greater part of which has been obtained from a special subscription, and none of it from the Parliamentary Grant. The society has likewise expended a sum, upwards of 800 *l.*, in the erection of an ornamental railing between Leinster Lawn and Merrion-square, also from funds independent of the Grant.

It is hoped, therefore, that the Government will at once see the necessity of advancing the sum of 3,000 *l.* required for the purchase of Shelbourne-yard, and thus relieve both the society and some of its most active members from the difficulty in which they are placed, which difficulty has arisen solely from the appropriation, by an Act of Parliament, of a great portion of the ground on which the society formerly held their agricultural exhibitions.

Richard Griffith.

London, 30 April 1864.

(Referred to in Q. 3007.)

STATEMENT of the ANNUAL AVERAGE EXPENDITURE of the ROYAL DUBLIN SOCIETY for Nine Years from 1 April 1856, to 31 March 1864, both inclusive.

DEPARTMENTS.	Salaries.	Wages.	Compensation and Retiring Allowances.	Rents, Taxes, and Insurances.	Fuel, Light, and Gas Fittings.	Furniture, Fitments, and Repairs.	Buildings, Totals.	Prizes.	Contingencies, Books, Binding, Specimens, Chemicals, and Apparatus.	Printing, Stationery, and Advertising.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Establishment - -	615 - -	330 2 -	26 - -	353 13 10	187 16 -	324 18 8	1,408 7 5	- -	134 7 1	435 18 5
Botanical Garden and Flower Shows.	179 3 4	491 7 10	20 11 -	144 19 -	172 8 11	- -	- -	33 6 8	317 4 3	—
Library - - -	235 4 7	101 7 5	5 11 1	- -	- -	- -	- -	- -	606 13 4	—
Museum and Mineralogy.	400 - -	65 - -	- -	- -	- -	48 3 2	11,062 7 5	- -	266 3 -	—
Agricultural Museum and Hall.	100 - -	6 10 -	- -	- -	23 - 2	- -	- -	- -	118 - -	3 4 -
Laboratory and Lecture room.	160 6 6	52 - -	- -	- -	- -	- -	- -	10 - -	37 12 8	—
Schools and Gallery of Art.	234 17 6	57 1 8	49 19 -	- -	20 3 3	30 - -	- -	20 12 1	41 5 -	—
Agricultural Exhibitions.	50 - -	6 10 -	- -	- -	- -	62 2 6	3,785 11 4	396 16 6	1,004 18 10	63 1 9
Art and Manufactures Exhibitions.	- -	- -	- -	- -	- -	- -	1,543 2 4	- -	1,083 6 7	—
Examinations for Certificates of Merit.	- -	- -	- -	- -	- -	- -	- -	13 4 6	—	—

23 April 1864.

(signed) *Henry C. White*, Registrar.

App. No. 3.

Royal Dublin Society.

Statement showing the Allocation of the Parliamentary Grant to the several Departments of the Society in the Year ended 31st March 1864; the actual Expenditure under the same heads, thus exhibiting how far the Grant has been supplemented from the Members' Subscriptions and Miscellaneous Receipts in the same period.

	Allocation from Grant.	Actually Expended.	Aid from Private Sources of Society.
Agriculture:	£. s. d.	£. s. d.	£. s. d.
Professor, Curator and Superintendent of Shows, Salaries, Laboratory, Porter, and Museum Porters' Wages, Chemicals, Fitments, Collections, and Incidents	588 – –	593 17 –	5 17 –
For Prizes at Shows	187 – –	233 5 –	46 5 –
For Shedding and other necessary expenses	nil	1,628 16 1	1,628 16 1
Botanic Gardens:			
Curator's Salary, Labourers' Wages, Rents, Fuel, Fitments, and Contingencies	1,496 – –	1,527 13 –	31 13 –
Museum of Natural History and Mineralogy:			
Directors' and Professor's Salaries, Porter's Wages, Collections, Fitments, and Contingencies	650 – –	641 16 5	—
Retiring Allowance to Museum Porter	nil	26 – –	26 – –
Library:			
Librarian's Salary, Clerk's Salary, Porter's Wages, Books, Binding, and Contingencies	930 8 –	960 13 8	30 5 8
Zoological Gardens, Grant in Aid	500 – –	500 – –	—
Guarantee Fund towards Exhibition 1864	150 – –	200 – –	50 – –
Establishment:			
Assistant Secretary, Registrar, Housekeeper, and (two) Clerks' Salaries; Allowances to late Masters of Schools, Servants' Wages and Liveries, Rents, Rates, Insurances, Repairs, Fuel, Light, Printing, Stationery, Advertising, and Incidents	1,598 12 –	2,544 11 11	945 19 11
School of Art Statue Gallery:			
Salaries, Wages, Examples, and Contingencies	nil	411 9 4	411 9 4
Total £.	6,100 – –	9,268 2 5	—

(signed) *Henry C. White*, Registrar.

App. No. 3.

Royal Dublin Society.

A Brief Statement of the Sums raised by Local and Private Subscriptions, during the past Nine Years, and applied by the Society to the Buildings and Works of the Museum of Natural History, the Library, the Agricultural Hall; and what, if any, specific Funds have been Voted by Parliament.

Sums Voted by Parliament.	Sums Raised by Local and Private Subscriptions.	£.	s.	d.
	Museum of Natural History.			
	Advanced by the Society from the Members' Admissions and Subscriptions	4,766	2	5
	Profits of Winter Garden Exhibition	300	4	2
	Dividends and Profits on Transfer of Stock	267	7	2
	Donation from British Association	95	3	8
	Private Subscriptions	713	10	–
Voted by Parliament £. 5,800 – –	£.	6,142	7	5
	The Library.			
Voted by Parliament £. 200 – –	Advanced by Society from Members' Subscriptions, &c. £.	150	–	–
	The Agricultural Hall.			
	Advanced by Society from Members' Subscriptions, &c.	1,674	15	10
	Private Subscriptions, &c.	3,953	17	10
Voted by Parliament Nil.	£.	5,628	13	8
	Director's and Professor's Rooms, in connection with Museum and Theatre, &c.			
Voted by Parliament Nil.	Advanced by Society from Members' Subscriptions, &c. £.	561	4	3

Expended on Lawn out of Society's Private Funds:—

		£.	s.	d.	£.	s.	d.
1862–63.	Palisades and Gates, Stone, and Masonry	443	–	10			
„	Iron Work	366	15	–			
					809	15	10
1863.	Manure, Grass Seeds, and Sums spent in Labour				164	7	2
				£.	974	3	–

22 April 1864.

(signed) *Henry C. White*, Registrar.

App. No. 3.

Royal Dublin Society.

Return of the Sums Received for Members' Subscriptions and Miscellaneous Sources from 1 January 1800 to 31 March 1864, inclusive.

YEARS.		Miscellaneous Receipts.			Members' Subscriptions.		
		£.	s.	d.	£.	s.	d.
1801	Receipts for Year (1st January 1800 to 5th January 1802), Irish Currency.	235	9	–	1,882	19	3
1802	Receipts for Year	181	4	1	1,210	6	–
1803	Ditto - ditto	41	3	5	910	–	–
1804	Ditto - ditto	4	1	8	509	12	–
1805	Ditto - ditto	359	–	8	243	8	6
1806	Ditto - ditto	112	15	–	486	17	–
1807	Ditto - ditto	87	5	–	776	18	3
1808	Ditto - ditto	201	4	2	982	16	–
1809	Ditto - ditto	69	3	4	614	15	–
1810	Ditto - ditto	1,065	1	2	1,153	4	6
1811	Ditto - ditto	1,252	12	5	1,183	–	–
1812	Ditto - ditto	76	1	6	567	12	3
1813	Ditto - ditto	61	14	2	591	10	–
1814	Ditto - ditto	39	3	4	392	8	9
1815	Ditto - ditto	157	18	4	4,071	15	–
1816	Ditto - ditto	39	3	4	546	–	–
1817	Ditto - ditto	70	17	10	56	17	6
1818	Ditto - ditto	4	5	1	164	18	9
1819	Ditto - ditto	125	–	–	415	3	9
1820	Ditto - ditto	141	–	6	56	17	6
1821	Ditto - ditto	866	–	2	535	15	3
1822	Ditto - ditto	26	11	4	311	13	6
1823	Ditto - ditto	518	–	3	341	5	–
1824	Ditto - ditto	871	17	11	445	18	–
1825	Ditto - ditto	56	14	5	716	12	6
1826	Ditto - ditto	49	10	8	315	–	–
1827	Ditto - ditto	27	14	6	157	10	–
1828	Ditto - ditto	58	–	9	220	10	–
1829	Ditto - ditto	15	13	–	157	10	–
1830	Ditto - ditto	276	13	–	472	10	–
1831	Ditto - ditto	451	16	10	126	–	–
1832	Ditto - ditto	256	16	–	294	–	–
1833	Ditto - ditto to 31 March 1834	934	15	2	1,533	–	–
1834	Ditto - ditto „ 1835	391	17	–	1,344	–	–
1835	Ditto - ditto from 1 April	88	8	2	1,323	–	–
1836	Ditto - ditto	130	1	7	189	–	–
1837	Ditto - ditto	61	2	9	404	4	–
1838	Ditto - ditto	757	17	10	1,048	19	–
1839	Ditto - ditto	139	7	2	693	–	–
1840	Ditto - ditto	1,284	17	8	514	10	–
1841	Ditto - ditto	2,586	4	1	363	6	–
1842	Ditto - ditto	554	7	6	657	6	–
1843	Ditto - ditto	795	17	–	486	3	–
1844	Ditto - ditto	1,403	12	3	551	5	–
1845	Ditto - ditto	424	12	3	656	5	–
1846	Ditto - ditto	466	13	8	630	–	–
1847	Ditto - ditto	952	18	7	596	8	–
1848	Ditto - ditto	387	1	8	437	17	–
1849	Ditto - ditto	540	19	7	719	–	–
1850	Ditto - ditto	2,213	14	7	684	12	–
1851	Ditto - ditto	791	19	4	714	–	–
1852	Ditto - ditto	1,458	1	6	1,772	8	–
1853	Ditto - ditto	1,122	12	7	1,484	14	–
1854	Ditto - ditto	1,206	2	–	769	13	–
1855	Ditto - ditto	1,570	7	11	1,062	12	–
1856	Ditto - ditto	1,752	4	2	1,219	1	–
1857	Ditto - ditto	1,201	15	2	1,397	11	–
1858	Ditto - ditto	2,724	11	9	1,541	8	–
1859	Ditto - ditto	3,985	10	5	1,269	7	–
1860	Ditto - ditto	2,139	–	2	1,234	16	–
1861	Ditto - ditto	1,842	1	–	1,346	2	–
1862	Ditto - ditto	10,715	19	3	1,056	6	–
1863	Ditto - ditto to 31 March 1864	2,013	3	8	1,351	7	–

(signed) *Henry C. White*, Registrar.

Appendix, No. 4.

PAPERS handed in by Sir *Robert Kane*, 9 May 1864.

1.

ANALYSIS of the Grants to the MUSEUM of IRISH INDUSTRY, as it appears in the ESTIMATES for 1862–63, showing the Amounts taken really for the Service of the Museum, and the Amounts which properly belong to other Establishments, and ought to be Charged under other Heads.

	£. s. d.	£. s. d.
he Property being vested in the Office of Works, that Department ought to pay:		
Rents, Rates, and Taxes	253 6 –	
Buildings, Repairs, and Fitments	550 – –	
		803 6 –
he Lecture System, being in common with the Royal Dublin Society, that Body should pay:		
Half-salaries of Five Professors	400 – –	
Half-cost of attendance on same	52 – –	
Half-cost of Lecture Outfit	150 – –	
		602 – –
The Vote for Provincial Lectures, altogether separate		500 – –
Books and other expenses arising from the connexion of the Museum with the Geological Survey, and which should otherwise be defrayed from the Vote taken for the Geological Survey: proportion estimated at about		150 – –
Net amount taken for actual Museum Services		3,007 10 –
TOTAL Amount of Museum Vote in Estimates £.		5,062 16 –

2.

STATEMENT of the FINANCIAL RESULT of the Proposed Changes in the Relations of the ROYAL DUBLIN SOCIETY and the MUSEUM of INDUSTRY.

Present Expenditure to be Saved by the New Arrangements.	£. s. d.	New Expenditure Necessarily Incurred under the New Plan.	£. s. d.
alaries of Offices to be Abolished:		Retiring Allowances (taken at Three-fourths) for Abolition of Office:	
Director	400 – –	Director	300 – –
Curator	200 – –	Curator	150 – –
Chemist	200 – –	Chemist	150 – –
Professor of Physics	200 – –	Professor of Physics	150 – –
Professor of Chemistry	200 – –	Professor of Chemistry	150 – –
Professor of Zoology	100 – –	Professor's Clerk	120 – –
Clerk's Accountant	160 – –	New Professor of Mineralogy	200 – –
Laboratory Expenses	100 – –	Resumed by Professor of Botany	100 – –
Sundries	200 – –	Increase, Professor of Agriculture	50 – –
		Sub-Curator of Museum	150 – –
		Laboratory Expenses	100 – –
		Increase to Salaries of Officers of Royal Dublin Society for new duties:	
		Secretary, Registrar, and their Clerks	300 – –
TOTAL Saving £.	1,760 – –	NEW Outlay £.	1,920 – –

This supposes the Geological Survey, and its own special collections, to be kept up either at Stephen's-green, or in ome other suitable place.

3.

RETURNS of EXPENDITURE on MUSEUM SPECIMENS and MODELS, and on BOOKS for LIBRARY, for the Seven Years 1856 to 1862, inclusive; taken from 1 January to 31 December in each Year.

YEARS.	Specimens and Models. £. s. d.	Books. £. s. d.	TOTAL of each Year. £. s. s.
1856	395 15 10	205 8 6	601 4 4
1857	312 3 11	71 5 –	383 8 11
1858	65 17 4	146 8 –	212 5 4
1859	467 10 8	104 5 6	571 16 2
1860	121 1 6	129 6 2	250 7 8
1861	306 11 8	105 5 10	411 17 6
1862	356 13 6	106 6 9	463 – 3
TOTALS £.	2,025 14 5	868 5 9	2,894 – 2

Or, in average for each Year £. 413 8 *s.* 4 *d.* The Amount of Grant being £. 400.

4.

STATEMENT of Expenditure of Parliamentary Grant for Museum Purchases and Books for Library, &c., from 1 April 1854 to 31 March 1864.

HEADS OF EXPENDITURE.	1 April 1854 to 31 Mar. 1855.	1 April 1855 to 31 Mar. 1856.	1 April 1856 to 31 Mar. 1857.	1 April 1857 to 31 Mar. 1858.	1 April 1858 to 31 Mar. 1859.	1 April 1859 to 31 Mar. 1860.	1 April 1860 to 31 Mar. 1861.	1 April 1861 to 31 Mar. 1862.	1 April 1862 to 31 Mar. 1863.	1 April 1863 to 31 Mar. 1864.	General Total.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Museum purchases	210 9 –	168 4 9	113 16 9	212 17 5	53 9 10	255 17 6	189 1 9	145 18 6	213 3 –	112 12 2	1,675 10 8
Books for library	94 4 2	310 19 8	170 5 3	38 5 2	182 9 2	78 8 1	146 7 –	93 11 6	111 4 10	174 1 6	1,399 16 4
Instruments and models for illustration	– –	– –	157 7 –	110 6 6	208 19 6	80 12 6	102 8 6	92 7 6	23 13 6	107 12 9	883 7 9
Label and sample stands, and frames and shelves for cases	41 9 9	– 9 –	35 5 11	70 14 4	9 16 6	– 3 4	14 6 9	– 10 –	– 10 3	– –	173 5 10
Printing labels and arranging specimens, &c.	14 15 –	2 10 –	11 9 –	59 13 6	3 5 6	22 9 6	10 3 6	38 8 4	10 16 6	1 7 6	174 18 4
Drawing diagrams for illustration in the cases	– –	3 7 6	– –	– –	– –	17 10 –	22 4 6	15 11 –	5 17 6	18 11 –	83 1 6
Wood tablets for specimens	– –	13 17 11	– –	7 9 9	25 5 9	5 9 4	7 19 2	14 6 8	21 14 2	– –	96 2 9
Carriage of specimens	8 16 9	– –	– –	– –	– –	21 – 9	– –	– –	– –	– –	29 17 6
Travelling expenses	– –	– –	14 5 8	– –	16 8 4	9 8 3	– –	– –	12 13 –	– –	52 15 3
Total £.	369 14 8	499 8 10	502 9 7	499 6 8	499 14 7	490 19 3	492 11 2	400 13 6	399 12 9	414 4 11	4,568 15 11

5.

STATEMENT of Items and Amount of Expenditure of Parliamentary Grants made by the Museum of Irish Industry, from 1 April 1854 to 31 March 1864.

HEADS OF EXPENDITURE.	1 April 1854 to 31 Mar. 1855.	1 April 1855 to 31 Mar. 1856.	1 April 1856 to 31 Mar. 1857.	1 April 1857 to 31 Mar. 1858.	1 April 1858 to 31 Mar. 1859.	1 April 1859 to 31 Mar. 1860.	1 April 1860 to 31 Mar. 1861.	1 April 1861 to 31 Mar. 1862.	1 April 1862 to 31 Mar. 1863.	1 April 1863 to 31 Mar. 1864.	General Total.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Salaries of principal officers	1,325 – –	1,700 – –	1,700 – –	1,710 – –	1,720 – –	1,730 – –	1,740 – –	1,750 – –	1,760 – –	1,770 – –	16,905 – –
Wages of subordinate officers	226 9 5	296 1 –	349 16 –	393 4 4	391 – –	394 6 –	379 12 –	380 7 3	418 6 3	423 10 –	3,652 12 3
Purchase of specimens and books	369 14 8	499 8 10	502 9 7	499 6 8	499 14 7	490 19 3	492 11 2	400 13 6	399 12 9	414 4 11	4,568 15 11
Outfit for lectures	329 7 7	299 6 2	301 9 9	319 14 1	298 – 6	299 13 10	299 12 6	294 16 7	284 – 5	289 17 5	3,015 18 10
Repairs and fittings	482 15 –	549 8 6	550 – –	549 18 2	550 7 1	545 15 7	553 12 1	550 19 2	510 11 10	403 7 10	5,248 15 3
Fuel, light, and cleaning articles	114 16 9	127 6 6	200 17 7	201 16 3	197 16 9	212 17 1	200 18 5	230 16 –	184 17 7	190 – 8	1,862 3 7
Laboratories	96 17 3	98 15 10	99 19 5	99 9 1	97 1 6	95 5 7	100 1 1	103 3 8	97 3 1	107 10 3*	995 6 9
Advertisements	49 14 6	66 18 –	98 9 6	61 19 –	99 13 –	99 16 –	99 19 2	89 6 4	90 9 3	124 10 10	880 15 7
Incidents	47 13 –	90 13 4	109 – –	101 4 1	98 16 9	206 2 2	230 1 10	207 4 9	186 6 9	164 3 4	1,441 6 –
Rent, rates, and taxes	226 1 –	226 1 –	228 3 6	228 18 8	226 1 –	223 3 4	228 18 8	226 1 –	223 3 4	223 3 4	2,259 14 10
Travelling expenses	29 16 6	47 17 11	20 19 7	39 – –	45 13 4	40 18 10	49 18 6	50 – –	31 10 –	41 2 6	396 17 2
Prizes	– –	– –	24 – –	50 – –	46 – –	46 – –	50 – –	49 – –	36 – –	50 5 –	351 5 –
Fees received from students	– –	29 19 6	50 2 6	41 13 6	78 19 –	78 19 –	88 6 –	100 4 6	118 3 –	157 3 –†	789 4 –
Uniforms for porters	46 5 –	50 – –	50 – –	62 6 –	62 18 –	62 18 –	62 10 –	62 18 –	62 18 –	62 18 –	585 1 –
Total £.	3,344 10 8	4,081 16 7	4,285 7 5	4,358 9 10	4,457 5 6	4,528 14 8	4,576 1 5	4,495 10 9	4,403 2 3	4,421 17 1	42,952 16 2

* In the above item is included the sum of 70 *l.* for chemical apparatus for the use of the Professor of General Chemistry for lecture illustrations, and which has been charged to the Laboratory Department with the consent of the Chemist to the Museum.

† Up to the year 1857 only three-fourths of the fees received from the students were paid to the professors; but, since that period, by order of the authorities of the Department of Science and Art, each professor now receives the entire of the fees received from the pupils of his class.

— 6 —

RETURN of the Number of FREE and PAID LECTURES delivered; also the Number of Tickets Sold, the Average Attendance, and the Number of Persons who competed for Prizes, from the Session of 1854–55 to the Session of 1863–64.

Number of Free Lectures.	Number of Paid Lectures.	Lecturers.	Subject.	Number of Tickets Sold.	Average Attendance.	Number Competed for Prizes.
Session of 1854–55:						
6	- -	Professor Allman - -	Botany - - - -	- -	140	—
6	- -	Professor Barker - -	Mechanics - - - -	- -	370	—
6	- -	Professor Sullivan - -	Chemistry - - - -	- -	380	—
6	- -	Professor Jukes - -	Geology - - - -	- -	410	—
12	- -	Professor Jukes - -	Geology - - - -	- -	201	—
12	- -	Professor Barker - -	Physical Science - -	- -	365	—
	20	Professor Jukes - -	Geology - - - -	102	44	—
	20	Professor Allman - -	Botany - - - -	36	15	—
	20	Professor Sullivan - -	Chemistry - - - -	55	17	—
	20	Professor Barker - -	Physical Science - -	70	21	—
Session of 1855–56:						
12	- -	Professor Allman - -	Botany - - - -	- -	68	—
12	- -	Professor Sullivan - -	Chemistry - - - -	- -	129	—
	30	Professor Sullivan - -	Chemistry - - - -	143	62	21
	30	Professor Jukes - -	Geology - - - -	92	49	16
	30	Professor Barker - -	Physical Science - -	123	60	37
	30	Professor Allman - -	Botany - - - -	66	26	15
		Professor Sullivan - -	Practical Chemistry - -	11		
Session of 1856–57:						
12	- -	Professor Sullivan - -	Chemistry - - - -	- -	279	—
12	- -	Professor Jukes - -	Physical Geography - -	- -	291	—
	8	Professor Jukes - -	Geology - - - -	168	124	33
	8	Professor Sullivan - -	Chemistry - - - -	170	103	30
	20	Professor Barker - -	Physical Science - -	37	30	17
	20	Professor Sullivan - -	Chemistry - - - -	30	16	12
	20	Professor Jukes - -	Geology - - - -	59	52	11
	20	Professor Kinahan - -	Zoology - - - -	27	19	7
	20	Professor Kinahan - -	Botany - - - -	47	62*	7
		Professor Galloway - -	Practical Chemistry - -	15	13	9
Session of 1857–58:						
12	- -	Professor Sullivan - -	Chemistry - - - -	- -	135	—
12	- -	Professor Jukes - -	Physical Geography - -	- -	348	—
	14	Professor Kinahan - -	Zoology - - - -	31	18	7
	14	Professor Barker - -	Physical Science - -	17	6	3
	30	Professor Jukes - -	Geology - - - -	40	37	4
	30	Professor Sullivan - -	General Chemistry - -	26	16	5
		Professor Harvey - -	Botany - - - -	6	- -	2
		Professor Galloway - -	Practical Chemistry - -	39	- -	9
Session of 1858–59:						
12	- -	Professor Jukes - -	Physical Geography - -	- -	213	—
12	- -	Professor Sullivan - -	General Chemistry - -	- -	207	—
12	- -	Professor Kinahan - -	Zoology - - - -	- -	85	—
6	- -	Professor Harvey - -	Botany - - - -	- -	130	—
	6	Professor Kinahan - -	Zoology - - - -	12	11	5
	30	Professor Jukes - -	Geology - - - -	52	41	11
	16	Professor Barker - -	Physical Science - -	44	28	9
	30	Professor Sullivan - -	General Chemistry - -	42	27	9
		Professor Harvey - -	Botany - - - -	6	- -	5
		Professor Galloway - -	Practical Chemistry - -	45	- -	6
Session of 1859–60:						
12	- -	Professor Jukes - -	Physical Geography - -	- -	176	—
12	- -	Professor Sullivan - -	General Chemistry - -	- -	250	—
12	- -	Professor Kinahan - -	Zoology - - - -	- -	91	—

* The Systematic Lectures on Botany are delivered partly in the Theatre of the Royal Dublin Society and partly in the Botanic Gardens, Glasnevin.

Number of Free Lectures.	Number of Paid Lectures.	Lecturer.	Subject.	Number of Tickets Sold.	Average Attendance.	Number Competed for Prizes.
Session of 1859-60:—*cont^d.*						
6	- -	Professor Harvey - -	Botany - - - -	- -	71	—
	30	Professor Jukes - -	Geology - - - -	42	33	11
	30	Professor Sullivan - -	General Chemistry - -	39	27	11
	18	Professor Barker - -	Physical Science - -	35	20	10
		Professor Harvey - -	Botany - - - -	10	- -	7
		Professor Galloway - -	Practical Chemistry - -	36	- -	10
Session of 1860-61:						
12	- -	Professor Jukes - -	Physical Geography - -	- -	138	—
12	- -	Professor Sullivan - -	General Chemistry - -	- -	153	—
12	- -	Professor Kinahan - -	Zoology - - - -	- -	84	—
6	- -	Professor Harvey - -	Botany - - - -	- -	98	—
	7	Professor Kinahan - -	Zoology - - - -	16	13	12
	30	Professor Jukes - -	Geology - - - -	46	35	11
	30	Professor Sullivan - -	General Chemistry - -	35	26	7
	17	Professor Barker - -	Physical Science -	28	23	11
		Professor Harvey - -	Botany - - -	9	- -	7
		Professor Galloway - -	Practical Chemistry -	28	- -	10
Session of 1861-62:						
12	- -	Professor Jukes - -	Physical Geography - -	- -	121	—
12	- -	Professor Sullivan - -	General Chemistry - -	- -	196	—
12	- -	Professor Kinahan - -	Zoology - - - -	- -	59	—
6	- -	Professor Harvey - -	Botany - - - -	- -	81	—
	3	Professor Kinahan - -	Zoology - - - -	13	13	10
	30	Professor Jukes - -	Geology - - - -	35	24	10
	30	Professor Sullivan - -	General Chemistry - -	37	29	10
	18	Professor Barker - -	Physical Science - -	28	19	11
		Professor Harvey - -	Botany - - - -	7	- -	7
		Professor Galloway - -	Practical Chemistry - -	47	- -	8
Session of 1862-63:						
12	- -	Professor Sullivan - -	General Chemistry - -	- -	334	—
12	- -	Professor Jukes - -	Geology - - - -	- -	251	—
15	- -	Professor Morgan - -	Zoology - - - -	- -	134	—
6	- -	Professor Harvey - -	Botany - - - -	- -	104	—
	30	Professor Jukes - -	Geology - - - -	71	53	18
	30	Professor Sullivan - -	General Chemistry - -	54	40	10
	18	Professor Barker - -	Physical Science - -	35	27	9
		Professor Morgan - -	Zoology - - - -	12	- -	11
		Professor Harvey - -	Botany - - - -	12	- -	9
		Professor Galloway - -	Practical Chemistry - -	57	- -	13
Session of 1863-64:						
12	- -	Professor Sullivan - -	General Chemistry - -	- -	283	—
12	- -	Professor Jukes - -	Geology - - - -	- -	192	—
12	- -	Professor Morgan - -	Zoology - - - -	- -	154	—
6	- -	Professor Barker - -	Physical Science - -	- -	193	—
	6	Professor Morgan - -	Zoology - - - -	17	17	11
	30	Professor Sullivan - -	General Chemistry - -	39	28	12
	30	Professor Jukes - -	Geology - - - -	50	41	12
		Professor Galloway - -	Practical Chemistry - -	74		

SUMMARY of the Number of FREE and PAID LECTURES delivered; as also the Number of REGISTERED PUPILS, and of those who Competed for PRIZES, from the Session 1854-55 up to the Close of the Session 1862-63, inclusive.

	Number of Free Lectures.	Number of Paid Lectures.	Number of Tickets Sold.	Number Competed for Prizes.
Session 1854–55 -	48	80	263	—
„ 1855–56 -	24	120	435*	89
„ 1856–57 -	24	116	553*	126
„ 1857–58 -	24	88	159	30
„ 1858–59 -	42	82	201	45
„ 1859–60 -	42	78	162	49
„ 1860–61 -	42	84	162	58
„ 1861–62 -	42	81	167	56
„ 1862–63 -	45	78	241	70
TOTAL - - -	333	807	2,343	523

Some of the Systematic Lectures during the Sessions 1855–56 and 1856–57 were divided into Three Parts, of Ten Lectures each, and a separate Fee charged for each Part. This accounts for the large number of Registered Pupils during those two Sessions.

Appendix, No. 5.

PAPERS furnished by Sir *Robert Kane*, and referred to in his Evidence, 5 May 1864. App. No. 5.

COPIES of the EXAMINATION PAPERS used at the MUSEUM of IRISH INDUSTRY during the Session 1862-63.

Committee of Council on Education—Department of Science and Art. Museum of Irish Industry, Dublin.

SPECIAL EXAMINATION IN GEOLOGY.

On Thursday, 19 February 1863, from 7 p.m. to 10 p.m., by *J. Beete Jukes*, M.A., F.R.S.

PHYSICAL GEOGRAPHY.

1. MENTION the two principal mountain chains, and a few of the chief of the subordinate chains of the world, giving the general direction in each case.

2. The old Continent (Europe, Asia, and Africa) has a great internal basin of drainage distinct from the main ocean, and extending from Russia to China; what great European river flows into it? What other great rivers of Europe and Africa would flow into if the Straits of Gibraltar were closed by a dam rising just above the level of the sea? And why would you suppose that such a low dam would be sufficient to prevent the Mediterranean flowing over into the Atlantic?

3. What are Isothermal lines, and what is the direction of the January Isothermals in the British Islands, and along the N. W. shores of Europe?

4. Great masses of limestone, called coral reefs, are now being formed in some of the tropical seas, and large deposits of calcareous mud or "oaze" in the North Atlantic, while Stalactites and Tufa or Travertine are formed of the same substance on the land; what is the difference in the mode of formation of these marine and terrestrial deposits?

LITHOLOGY.

5. Mention the fifteen principal substances which enter into the composition of the minerals of which rocks are formed.

6. State the chemical composition of Orthoclase, Labradorite, Augite, Hornblende, and Stilbite, or state in general terms their chief ingredients, and the principal points of difference between them.

7. Of what minerals are the following rocks composed:—*a*, Trachyte; *b*, Granite; *c*, Chalk; *d*, Greenstone; *e*, Dolomite; *f*, Basalt; *g*, Gypsum? Which of them are of igneous and which of aqueous origin?

8. Name the rocks on the table marked A, B, C, D, E.

PETROLOGY.

9. Explain the meaning of the following terms:—*a*, Outcrop; *b*, Strike; *c*, Dip; *d*, Anticlinal; *e*, Synclinal; *f*, Contortion; *g*, Fault; *h*, Downthrow; *i*, Unconformability; *j*, Joints; *k*, Cleavage.

App. No. 5.

10. If an inclined fault cut a set of beds, what will be the relation between the inclination of the fault and its downthrow?

11. In a coalfield, the surface of which was quite level, the strike of a bed of coal was due E. and W., and its dip N. at 18°, or 1 in 3. Its depth then, at any point 100 yards due north of its outcrop, would be 33 yards 1 foot. On tracing that outcrop, however, it was found to be cut at one place by a fault coursing N. and S., and the continuation of the outcrop on the other side of the fault was found at a distance of 100 yards to the south of that place; in which direction was the downthrow, and what was its amount? Draw a rough plan and section illustrating your answer.

12. What do you understand by a "lode" or "mineral vein," and what are the chief differences between "vein mining" and "bed mining"?

Palæontology.

13. Refer each of the following extinct genera to its proper order, class, sub-kingdom or kingdom:—*a*, Loxonema; *b*, Spirifera; *c*, Orthoceratites; *d*, Phacops; *e*, Lepidodendron; *f*, Megalosaurus; *g*, Megatherium; *h*, Goniatites; *i*, Actinocrinus; *j*, Sigillaria; *k*, Cephalaspis; *l*, Holoptychius; *m*, Pecopteris.

14. What are the principal distinctions between the bivalve shells of the Brachiopoda and those of the Conchifera, and also between the univalve shells of the Gasteropoda and those of the Cephalopoda?

15. Name the fossils on the table marked F, G, H, I.

Geological History.

16. Write out the series of the periods and epochs into which the geological history of the earth is now usually divided.

17. Of which of the deposits of these periods are there examples in Ireland, and to which part of the country are those of the Mesozoic epoch confined?

18. Refer to its proper period of formation each of the following local sets of beds:—*a*, the Thanet Sand; *b*, the Wenlock Limestone; *c*, the Forest Marble; *d*, the Coralline Crag; *e*, the Bradford Clay; *f*, the Stonesfield Slate; *g*, the Upper Greensand; *h*, the Bala Limestone.

19. During which period did each of the following species live:—*a*, Eulephas primigenius; *b*, Histioderma Hibernicum; *c*, Conocardium Hibernicum; *d*, Lingula Davisii; *e*, Lithostrotion affine; *f*, Producta semireticulata; *g*, Spirifera striata; *h*, Terebratula hastata; *i*, Nummulites lævigatus; *j*, Scaphites equalis; *k*, Inoceramus mytiloides; *l*, Calamites cannæformis; *m*, Nautilus imperialis; *n*, Fusus longævus; *o*, Ostræa deltoidea?

20. What are the principal extinct species of Mammalia that were contemporaneous with the earlier races of Man? What was the general character of the climate of the British Islands when those animals first lived, and what are the chief proofs of the prevalence of such a climate.

Committee of Council on Education—Department of Science and Art.

Museum of Irish Industry, Dublin.

Examination in Chemistry.

On Thursday, 2 April 1863, by Professor *Sullivan*.

1. Write the formulæ, and give the equivalant volume (of such as can be experimentally determined), compared with that of hydrogen=2, of the following compounds:

Compounds of hydrogen with—Br, S, P, O, As, Cl, Te, H, Sb, I, Se, N.
Compounds of oxygen with—S, Br, Se, Te, As, Cl, I, Bo, Si, N, C, P, Sb.
Compounds of chlorine with—S, P, As, Sb.

2. Explain by symbols the following reactions:—

1. Action of water upon NO_4.
2. Action of SO_2 upon HO,NO_5.
3. When HCl and HO,NO_5 are boiled together.
4. Preparation of ammonia by means of NH_4Cl and lime.
5. When NH_4O, NO_5 is heated strongly.
6. When $2(HO,SO_3)$ and KO,NO_5 are heated together.

7. Action

7. Action of HO upon PCl_5 and PCl_3.
8. Action of copper and charcoal, respectively, when treated with oil of vitriol.
9. Action of copper, silver, and zinc, respectively, upon HO,NO_5, 3HO.
10. Action of HCl upon FeS, and SbS_3, respectively.
11. Preparation of chlorine by means of Na Cl, Mn O_2, and HO,SO_3.
12. When phosphorus and nitric acid are boiled together.
13. Action of bromine upon KO,HO.
14. Action of chlorine upon hydrate of lime.
15. The formation of perchlorate of potash by the action of heat upon the chlorate.
16. Action of chlorine upon a solution of FeO,SO_3.
17. Action of iron, at a red heat, upon the vapour of water.
18. Action of Na upon water.
19. Action of chlorine upon a solution of ammonia.
20. Action of ammonia upon charcoal at a red heat.

3. Write the formulæ of the following compounds:— Cyanogen, gaseous, liquid and solid chlorides of cyanogen, cyanic, fulminic, and cyanuric acids; hydrocyanic acid, ferrocyanogen, and its potash salt, and ferrid-cyanogen, and its potash salt.

4. How would you express the composition of the following compounds, by supposing them to be derived from the water type :—Al_2O_3; KO,SO_3; HO,SO_3; HO,SO_3; SnO_2; HO,NO_5; KO,HO; KO; $3HO,PO_5$; HS.

5. Classify the following metals into those which—*a*, decompose water in the cold; *b*, at a temperature of boiling; *c*, at a red heat; *d*, in the cold in the presence of an acid; *e*, at a white heat; and *f*, not at all:—Ca, Bi, Cd, K, Mg, Al, Cu, Hg, Co, Ag, Fe, Au.

6. Classify the following oxides into those which—*a*, are reduced to the metallic state by heat alone; *b*, which are not reduced by hydrogen alone; *c*, which are not reduced by charcoal alone:—Cr_2O_3, MnO, Fe_2O_3, ZnO, Al_2O_3, AgO, Au_2O_3, CuO.

7. What do you understand by hemihedral and holohedral forms; and by the terms isomorphism, and dimorphism, and allotropism?

8. How many functions may water perform in a salt?

9. Define the principal laws which govern combination by weight, Gay-Lussac's law of volumes, and Berthollet's laws for the action of an acid upon a salt.

10. Explain the changes which take place in the vinic fermentation of sugar.

11. Explain what is inverted sugar; that is, the change which takes place when cane sugar is boiled with chlor-hydric acid; mention to what family of compounds cane sugar should be referred.

12. What are vinic acids, and explain the theory of etherification.

13. If the formula of a monobasic alcohol be $C_{2m}H_{2m+2}O_2$, how would you write the formulæ of the following derivatives:—The radical in combination and free; the aldehyde; the monobosic acid with O_4; the biatomic alcohol; the triatomic alcohol; the biatomic acid; the primary monamine base containing the radical; and the urea, or diamine, containing the radical of the biatomic acid.

14. Write the formulæ of the following compounds:—*a*, derived from common alcohol, $C_4H_6O_2$—sulphide of ethyle (=4 vol.); tellur-ethyle; the compounds of ether with sulphuric acid, corresponding to neutral and bisulphate of potash (= 4 vol.); acetic ether; iodide of ethyle.

15. Write the formulæ of the following fats:—Trichlorhydrine, monochlorhydrine, diacetine, monostearine, trioleine [glycerine, $C_6H_8O_6$; acetic acid, $C_4H_4O_4$; stearic acid, $C_{36}H_{36}O_4$; oleic acid, $C_{36}O_{34}O_4$].

16. What formula would you assign to a salt having the following composition:—

PbO—83·27	Equivalent of lead	=104.
NO^5—13·38	„ oxygen	= 8.
HO — 3·35	„ N	= 14.
	„ H	= 1.

Committee of Council on Education—Department of Science and Art. Museum of Irish Industry, Dublin.

Examination in Natural Philosophy.

Friday Evening, 22 May 1863.—Examiner, *William Barker*, M. D.

1. What is the mechanical equivalent of heat, and how was it ascertained by experiment?

2. Explain the different modes of measuring temperature.

3. Reduce 57° of Fahrenheit to the degrees of Centigrade and Reaumur; 180° of

App. No. 5.

Reaumur to Fahrenheit; 60° of Centigrade to Fahrenheit, and 10° Centigrade to Fahrenheit.

4. How may actual expansion be ascertained, the lineal being given?

5. What is the relative diathermancy of glass, rock salt, alum, and rock crystal?

6. How are the specific heats of bodies ascertained?

7. Describe the methods of ascertaining the elastic force of vapours at different temperatures.

8. What advantages result from working steam expansively in the steam-engine?

9. What are the causes of waste of power in the steam-engine?

10. Three insulated conductors are placed near each other in the same line; describe their condition when an electrified mass is brought near them.

11. Describe the theory of the Leyden Jar.

12. How is the electric condition of the atmosphere ascertained, and how is it shown that its different strata contain free electricity?

13. What is the theory of the Voltaic Battery, and state the progressive improvements made in it, and the theory of its perfect development?

14. State the different deflections of a magnetic needle corresponding to a current of electricity passing above, below, and at each side of it.

15. What are the causes retarding the passage of an electric current through a wire of great length?

16. What is the pressure per square foot which water exerts on a depth in the ocean of 10,000 feet?

17. What are the methods of taking the specific gravity of solids, liquids, and gases?

18. How can the specific gravity of solids lighter than water be ascertained?

19. A mixed mass of gold and quartz (the specific gravity of the latter being 2·6) weighs 20 lbs. (its specific gravity is 8·5), how much gold does it contain?

20. A fluid of specific gravity 11·20 is mixed with three times its bulk of another fluid having specific gravity 12·52; supposing the fluids do not act chemically on each other, what will be the specific gravity of the mixture?

21. Mention the practical method of taking the specific gravity of a gas.

22. What will be the difference in ascensive power of a balloon filled with 20,000 cubic feet of hydrogen, specific gravity 0·068, and coal gas, specific gravity 0·56; and what absolute weight will each raise in the air, including weight of the balloon?

Committee of Council on Education—Department of Science and Art. Museum of Irish Industry, Dublin.

Special Examination in Botany, June 1863, by *William H. Harvey*, M.D., M.R.I.A.

1. Give an account of any of the Unicellular Algæ described in the first lecture.

2. What is the ordinary cellular structure of the thallus of a Lichen?

3. What useful purpose is served by the pits in pitted cellular tissue, and how is the desired end attained?

4. What is the structure of the stem in a grass-tree (*Xanthorrhœa*)?

5. Characterize a *cyme*; and explain the anomalous appearance of the *scorpioid-cyme.*

6. What properties do you look for in leaves that are pellucid-dotted? What is the common structure, and what the contents of such dots?

7. How are *Clematideæ* known from other *Ranunculaceæ?*

8. Explain the opposition of the floral organs in *Berberideæ.*

9. How do *Capparideæ* differ from *Cruciferæ?*

10. What description of ground do *Cistaceæ* frequent? Where are the only Irish species of the order found? And in what region are *Cistaceæ* most abundant?

11. What is the character of the ovary and placentation in a Violet?

12. Define

12. Define and give examples of the sub-orders of *Caryophylleæ*.

13. What are the general properties of *Malvaceæ*? Name the most famous plant of the Order, and state for what it is remarkable.

14. From what Nat. Order is Gamboge derived; and in what state does it exist in the plants that yield it?

15. By what characters are *Geraniaceæ* distinguished?

16. How does the ovary of *Rutaceæ* differ from that of *Aurantiaceæ*?

17. What variations are observable in the stamens of *Papilionaceæ*?

18. What is the source of Gum Arabic, and how is it collected?

19. How does a Strawberry differ in structure from a Raspberry?

20. What are the floral characters of *Begonia*?

21. What relation, in number and insertion, do the stamens bear to the petals in *Lythraceæ*?

22. Give the floral characters and geographical distribution of *Fuchsia*.

23. What relation does the calyx bear to the petals in *Portulaceæ*?

24. By what character does *Mesembryanthemum* show an affinity with the *Caryophylleæ*?

25. What is the structure of the perianth in *Cactaceæ*, and what the geographical range of that Order?

Committee of Council on Education—Department of Science and Art.

Museum of Irish Industry, Dublin.

Thursday Evening, 2 July 1863.—*John Morgan*, F.R.C.S.I., Examiner.

No. 1. WHAT are the modifications of the respiratory organs in the first two subregna of the animal kingdom?

No. 2. What are the orders and distinctive characteristics of Insecta?

No. 3. Refer to their proper places (and give the reasons for so doing)—cochineal, dragon-fly, turnip-insect, bee, wasp, wire-worm, gadfly, botfly, gnat, weevil, silk-worm—and give the technical name of each.

No. 4. What are the characteristics of birds, and enumerate the orders?

No. 5. Contrast the nervous systems of Mammalia, Aves, Mollusca, and Articulata.

No. 6. Describe the Annelida and the structure of the leech.

No. 7. Where do we find the transitions between mammals and birds, birds and reptiles, reptiles and fish, fish and mollusca?

No. 8. How distinguish between an insectivorous, carnivorous, and ruminating animal?

No. 9. What are the distinguishing characters of the poisonous snakes, and describe the poison apparatus?

Museum of Irish Industry, Dublin.

An Abstract Account of the Receipts and Payments of Sir *Robert Kane*, for the Month ending 30 April 1864.

—	Day of the Month.	RECEIPTS. Head and Description of Service.	Totals. £. s. d.
April -	1	To Balance from preceeding account -	250 10 3
April -	26	To Paymaster General imprest for current expenses - -	400 - -
		£.	650 10 3

Day of the Month.	PAYMENTS. Head and Description of Service.		Amount. £. s. d.	No. of Voucher.	Totals. £. s. d.
		Wages of Subordinate Officers, and Extra Labour:			
2	Sundry - - -	Wages for the week ending -	6 11 -		
9	- ditto - - -	- ditto - - ditto - -	6 11 -		
16	- ditto - - -	- ditto - - ditto - -	6 11 -	41	
23	- ditto - - -	- ditto - - ditto - -	6 11 -		
30	- ditto - - -	- ditto - - ditto - -	6 11 -		
2	Ellen Moore - -	Sundry cleaning work - -	- 8 3	2	
4	Mary Hyland - -	- - - ditto - - - -	- 3 -	3	
7	Patrick O'Doherty -	Sundry labouring work - -	- 10 -	5	
9	Ellen Moore - -	Sundry cleaning work - -	- 8 3	7	
16	- ditto - - -	- - - ditto - - - -	- 8 3	20	
23	- ditto - - -	- - - ditto - - - -	- 8 3	26	
30	- ditto - - -	- - - ditto - - - -	- 8 3	40	
				-	35 9 3
		Museum and Library:			
13	John Kelly - -	Specimen of hematite - -	- 8 -	8	
30	John H. Orpen -	One book - - - - -	- 12 -	38	
30	Hodges, Smith & Co.	Books - - - - - -	3 1 -	51	
				-	4 1 -
		Outfit for Illustrations for Lectures:			
16	J. Spencer & Son -	Physical apparatus - - -	29 14 -	23	
25	- - ditto - -	Chemical apparatus - - -	3 14 -	31	
29	Henry O'Hara -	Drawing diagrams - - -	- 10 -	37	
				-	33 18 -
		Ordinary Repairs, Furniture, Fittings:			
16	Robert Brown - -	Making gas apparatus - -	1 - -	17	
16	Joseph Saunders -	Weights - - - - - -	- 3 8	18	
16	J. Spencer & Son -	Cleaning chemical balance - -	- 12 6	22	
20	Robert Brown - -	Making smoke consumer - -	- 12 6	24	
23	Noble Talbot - -	One mahogany tray - - -	1 5 -	28	
23	- ditto - - -	One framed case - - -	5 - -	29	
23	- ditto - - -	Sundry fittings and repairs -	6 15 3	30	
30	P. Canoll - -	Sundry articles and repairs -	4 15 -	43	
30	Ross & Murray -	Sundry repairs - - - -	- 8 11	45	
30	- ditto - - -	- ditto - - - - -	1 12 8	46	
30	John Battersby -	Piece of plate glass - - -	2 - -	47	
30	- ditto - - -	Sundry repairs - - - -	11 19 -	48	
30	- ditto - - -	Sundry painting work - -	12 - -	49	
30	Noble Talbot - -	Repairing two tables - - -	- 15 3	56	
				-	48 19 9
		Laboratories:			
30	Boyd & Goodwin -	Chemicals - - - - -	- 13 8	52	
				-	- 13 8
		Fuel and Cleaning Articles:			
16	Lambert, Brine & Co.	Soap - - - - - -	- 11 4	21	
30	P. Canoll - -	Sundry articles - - - -	1 5 4	42	
30	James Jordan - -	Firewood - - - - -	1 - -	44	
30	Sawyer & Atkin -	Coals - - - - - -	3 15 -	50	
30	Boyd & Goodwin -	Sundry articles - - - -	1 2 3	53	
				-	7 16 11
		Advertisements and Printing:			
16	Alexander Eagar -	One advertisement - - -	- 8 6	10	
16	James Williams -	- - ditto - - - -	- 10 6	11	
16	Gunn & Cameron -	- - ditto - - - -	- 12 -	12	
16	Daniel Taylor - -	Advertisements - - - -	- 12 8	13	
16	J. Tighe - - -	- - ditto - - - -	- 19 -	14	
16	J. Harding - -	- - ditto - - - -	1 1 -	15	
16	J. Ethelred Knox -	- - ditto - - - -	1 11 6	16	
				-	5 15 2
		Uniforms for Porters:			
25	George Sykes - -	Uniforms for porters - - -	52 8 -	32	
25	Edward O'Kelly -	Boots for porters - - -	2 - -	33	
25	Wright, Brothers -	Hats for porters - - -	3 10 -	34	
				-	57 18 -
		Incidents and Small Disbursements:			
1	A. Marshall - -	Carriage of a box - - -	- 3 4	1	
7	Patrick O'Doherty -	Three small trees - - -	- 1 6	4	
7	Patrick Lunney -	Gravel - - - - - -	1 15 -	6	
14	Francis Kelly - -	Posting up placards - - -	- 5 -	9	
16	James O'Hara - -	Dusting office, carpet, &c. - -	- 5 -	19	
21	Patrick Wright -	Cleaning out ashpit - - -	- 5 -	25	
23	Patrick Lunney -	Gravel - - - - - -	1 1 -	27	
26	Pugh, Collins & Marsh	Bottles - - - - - -	- 15 6	35	
28	William Howley -	Sweeping in front of Museum -	- 5 -	36	
31	Daniel Moran - -	Sweeping chimneys - - -	1 6 6	39	
31	George Penny - -	Small disbursements - - -	1 4 4	55	
31	Postmaster - -	Postage account - - - -	- 14 3	54	
				-	8 1 5
					202 13 2
		By Balance carried to next Account - - -			447 17 1
				£.	650 10 3

I hereby certify that the foregoing account is just and true, according to the best of my knowledge and belief,

13 May 1864. *George Penny*, Clerk to the Museum.

Countersigned, and certified as correct, to the best of my belief,

14 May 1864. *Robert Kane*, Director.

ANNUAL ACCOUNT of the RECEIPTS and PAYMENTS of Sir *Robert Kane*, from 1 April 1863 to 31 March 1864.

DATE.	RECEIPTS.	AMOUNT. £. s. d.	DATE.	PAYMENTS.	AMOUNT. £. s. d.
1863:			1863-64.		
	To Balance in favour of Board of Trade in hands on 1st April 1863, and employed in defraying current expenses - -	341 14 4		By Salaries of principal officers and professors paid directly through the Paymaster-General - - - - - -	—
1 June -	,, Fees received for admission to lectures -	84 4 –		,, Wages and extra labour - - -	423 10 –
9 ,, -	,, Board of Trade imprest for current expenses - - - - - - -	400 – –		,, Purchase of specimens and books - -	414 4 11
30 ,, -	,, Deduction for income tax from Mr. Plunkett's salary - - - - - -	– 5 10		,, Outfit and illustrations for lectures -	289 17 5
1 July -	,, Fees received from students of zoological class - - - - - - -	1 4 –		,, Prizes - - - - - - - - -	50 5 –
1 Aug. -	,, Fee received from student of chemical class - - - - - - -	2 – –		,, Rent, rates, and taxes - - - -	223 3 4
18 Sept. -	,, Board of Trade imprest for current expenses - - - - - - -	400 – –		,, Ordinary repairs, furniture, and fittings -	403 7 10
30 ,, -	,, Deduction for income tax from Mr. Plunkett's salary - - - - - -	– 5 10		,, Laboratories - - - - -	107 10 3
16 Nov. -	,, Board of Trade imprest for current expenses - - - - - - -	400 – –		,, Fuel, light, and cleaning articles - -	190 – 8
5 Dec. -	,, Fees received from students of chemical classes - - - - - - -	69 15 –		,, Advertisements and printing - - -	124 10 10
31 ,, -	,, Deduction for income tax from Mr. Plunkett's salary - - - - - -	– 5 10		,, Travelling expenses - - - -	41 2 6
1864:				,, Incidents and small disbursements - -	164 3 4
				,, Fees received for admission to lectures -	157 3 –
				,, Uniforms for attendants - - -	62 18 –
31 Jan. -	,, Board of Trade imprest for current expenses - - - - - - -	400 – –		,, Special lectures paid directly by the Paymaster General through the Committee of Lectures - - - - - -	—
23 Mar. -	,, Ditto - - - ditto - - - -	800 – –			
31 ,, -	,, Cash received for sale of catalogues -	2 6 8		£.	2,651 17 1
31 ,, -	,, Deduction for income tax from Mr. Plunkett's salary - - - - - -	– 5 10		,, Balance carried to next Account - -	250 10 3
	£.	2,902 7 4		£.	2,902 7 4

I, Sir Robert Kane, do solemnly and sincerely declare that the foregoing account is just and true, according to the best of my knowledge and belief, and I make this solemn declaration conscientiously, believing the same to be true.

Robert Kane, Director.

15 April 1864.

I hereby certify that the foregoing account is just and true, according to the best of my knowledge and belief.

George Penny, Clerk to the Museum.

14 April 1864.

Appendix, No. 6.

Copy of Treasury Minute, dated 27 December 1844.

App. No. 6.

Sir Robert Peel states to the Board that various representations have been addressed to him, as to the importance of effectually prosecuting and completing a Geological Survey of Great Britain and Ireland, for which sums have been from time te time voted in the Ordnance Estimates, in connection with the Trigonometrical Survey in progress under that department.

That, upon communication with persons the most distinguished for their geological knowledge on the one hand, and with the Master General of the Ordnance on the other, he is confirmed in the opinion that a Geological Survey has no direct connection with the survey conducted by that Board, and that, although among the engineer officers employed upon the latter, many may be found, who, from having given attention to geological subjects, may be qualified for its execution, yet that, upon the whole, considering the inconvenjence to which the union of the two surveys has in some instances given rise, it appears more advisable that the conduct of it should be withdrawn from the Military Department, and that it should be separately conducted under the direction of persons who have made this branch of science more particularly their study. And Sir Robert Peel further deems it advantageous that it should be brought into direct connection with the Museum of Economic Geology, for which sums have been latterly voted by Parliament, and the extension of which is an object of general interest and importance.

My Lords agree in the view which Sir Robert Peel has taken of this subject, and think it expedient that a separate estimate should be prepared and submitted to Parliament, of the total sum required for the Geological Survey of Great Britain and Ireland, and of the sum which it may be annually advisable to allot to this object.

As my Lords deem it advisable to connect this survey with the Museum of Economic Geology, it will be necessary to add to the estimate such sum as may be necessary to provide an adequate building in London and in Dublin respectively, calculated at once to afford facility for inspection by the public, which the present building does not offer, and ready means of information to those engaged in scientific pursuits.

Considering that the Museum in London has been from its foundation under the direction of the Commissioners of Woods and Forests, my Lords deem it advisable that all matters relating to the Geological Survey should in future be committed to the superintendence of the First Commissioner of Woods and Forests under the control of this Board.

Write, therefore, to the First Commissioner of Woods and Forests, acquainting him with the views of my Lords, and request that if his Lordship has no objection to undertake these duties, he would submit to my Lords his opinion as to the persons by whom it would be advisable that the survey should be conducted, as to the expense that it may be necessary annually to incur in the prosecution of it, and as to the sum required for the establishment and maintenance of the Museum in London, and in Dublin, to which my Lords have already adverted.

Letter from *C. E. Trevelyan*, Esq., to the Earl of *Lincoln*, dated 1 January 1845.

Treasury Chambers,
1 January 1845.

My Lord,

The Lords Commissioners of Her Majesty's Treasury having considered the importance of effectually prosecuting and completing a Geological Survey of Great Britain and Ireland, I have it in command to transmit herewith, for your information, a copy of their Lordships' Minute of 27th ultimo, containing their views upon this subject, and I am to request, that if your Lordship has no objection to undertake the duties therein specified, you will submit to this Board your opinion as to the persons by whom it would be advisable that the survey should be conducted, as to the expense that it may be necessary to incur in the prosecution of it, and as to the sum required for the establishment and maintenance of the Museum in London, and in Dublin, to which my Lords have adverted in their said Minute.

I have, &c.
(signed) *C. E. Trevelyan.*

LETTER from the Earl of *Lincoln*, to the Lords Commissioners of Her Majesty's Treasury, dated 13 January 1845. App. No. 6.

Office of Woods, &c.
13 January 1845.

My Lords,

I HAVE had the honour of receiving, by a communication from Mr. Trevelyan, bearing date 1st instant, your Lordships' Minute of the 27th ultimo, conveying to me an intimation of your Lordships' views, in respect to the future prosecution of the Geological Survey of Great Britain and Ireland, in connexion with the transfer of certain duties of direction and control, which your Lordships are of opinion should in future be committed to the Chief Commissioner of this Board, and with the application and extension of the results of that survey to purposes for which in London, under your Lordships' sanction, an institution is already established, and put in charge with this department.

I beg leave to assure your Lordships in reply, not only of my willingness, but of my earnest desire to carry out the intentions of Her Majesty's Government in this matter to the best of my ability; and, having stated this, I will proceed at once, in obedience to your Lordships' wishes, and, as far as my necessarily limited knowledge of details will permit, to point out the mode by which I think those intentions may be best effected.

The Geological Survey of Great Britain, as your Lordships are aware, originated in the year 1832, in an offer of Sir Henry de la Beche to supply the data for colouring geologically certain sheets of the Ordnance map of England, comprising parts of Cornwall, Somerset, and Dorset, and the whole of the county of Devon. A sum of 300 *l.* in aid of this service (Sir Henry de la Beche contributing the remaining, and the greater portion of the expense), was charged against the survey of Great Britain in that year; and subsequently the survey has been extended, under his direction, over other portions of the country.

The Geological Survey of the counties of Cornwall, Devon, Somerset, Gloucester, Monmouth, Glamorgan, Caermarthen, Pembroke, with portions of Wilts, Dorset, Worcester, Brecon, and Cardigan are finished, and are either published, or are ready for publication. The remainder of South Wales, with the northern portion of the Principality, and some of the adjoining English counties, may be stated as at present under examination, parts of these only being completed.

From a return with which I have been favoured, by the Master General and Board of Ordnance, it appears that six persons, civilians, are employed under Sir Henry de la Beche, as his assistants upon the survey; that up to the 31st March 1844 (including from 1835 to 1839, the services of an Ordnance Surveyor, chiefly directed to the correction of the pre-existing maps for geological purposes), the cost has, on the whole, amounted to rather more than 11,000 *l.* and that the sum set apart for it in the Ordnance Estimates for the current parliamentary year is 1,950 *l.*, which is appropriated as follows, viz.—

	£.	£.
To the Director - - -	500	
In lieu of travelling expenses -	100	
		600
To Assistant Geologists—		
One at 300 *l.* - - -	300	
Two at 200 *l.* - - -	400	
Three at 150 *l.* - -	450	
		1,150
To contingencies - - -	- -	200
		1,950

For the application of these moneys, however, there appears to have been no specific parliamentary authority, nor, except in casual statements, and discussions upon the Estimates of which they form a portion, do I find any notice of this service in Parliament, and certainly none at all commensurate with its claims upon the public attention.

The time, however, it appears to me, is now arrived, at which the Geological Survey should take its proper position in the estimates annually submitted to Parliament by your Lordships' Board, accompanied by a report of its progress within the previous year, and of the portion remaining to be accomplished. Your Lordships will, I feel assured, concur with me in opinion that independently of the expediency of such a practice on Parliamentary grounds, publicity supplies an encouragement to zeal, where zeal exists, and a stimulus where it is wanting, and that the practical importance of the principle is in no instance more manifest than where in connexion with the acceptance of great individual responsibilities the question is one of giving or withholding the public money.

I feel the less hesitation in submitting these observations to your Lordships on the present occasion, inasmuch as, with the facilities afforded by my position for becoming informed of the real progress of the Geological Survey, I can testify that no want of either zeal or diligence can be imputed to the parties concerned in its prosecution.

Its advances, however, from the inadequacy of its resources, have hitherto been slow and unsatisfactory, and I should recommend that a vote of at least 4,000 *l.* should be taken in the ensuing, and in every future year, until the undertaking is completed.

Having consulted Sir H. de la Beche as to the period within which the survey of Great Britain could be brought to a close, with the additional assistance I have suggested, he assures me that with an annual vote of 4,000 *l.* its present rate of progress would be considerably more than doubled; and that the whole would be brought to a conclusion within 12, or at the farthest 14 years from the present time.

It appears to me highly desirable that the entire survey should, if possible, be the work of one and the same supervision; but with the sum hitherto set apart for its prosecution, it is inconsistent with the ordinary probabilities of human life, that Sir Henry de la Beche, or indeed any geologist of equal maturity and experience with himself in the higher requisites for such a service, should live to witness the termination of his labours.

The amount, therefore, which I have recommended, is as small as I think consistent with the completion of the survey, conjointly with the attainment of an object to which I cannot help attaching very great importance, but if your Lordships' views should differ from my own on this point, I would then only urge that the sum to be now submitted to Parliament should, in future Sessions, be adhered to, inasmuch as any diminution would necessitate the dismissal of men who had been trained to the service, and whose places it would involve a loss both of money and of time to supply.

It affords me great pleasure to find that your Lordships are disposed to give increased efficiency to the Museum of Economic Geology in London, an institution to the condition of which, but for difficulties which I trust are now removed, I should

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should have long since felt it my duty to draw your Lordships' attention.

The Museum in Craig's-court was founded in the year 1835, in connection with the Geological Survey of Great Britain.

Your Lordships will find a statement of the earlier circumstances of its progress in a letter addressed to the Chancellor of the Exchequer, by my predecessor at this Board, under date 26th February 1839.

From the rapid extension of its collections, partly from the Geological Survey, partly from foreign sources, and very considerably, I may add, from individual contributions, the present building has, for some time past, become unsuited to the exigencies of the institution, and a larger building, and another site, have at length become indispensable.

To meet these exigencies, propositions of various kinds, and applying to various localities, have within the last two years been brought under my consideration; but until now none have been suggested, which would, at any reasonable cost to the public, have provided the accommodation required. A property, however, belonging to Her Majesty, lying between Piccadilly and Jermyn-street, will be out of lease on the 5th of April next; and some of the shops and houses of which it consists, being in a very dilapidated condition, it has been recommended to pull them down, and to occupy the ground with new buildings. The site has a frontage of about 70 feet to each street, with a depth between the two of about 150 feet. It would afford ample accommodation for houses and shops in both frontages, and for a museum in the centre, arranged in the manner shown in the accompanying plans. By these, as your Lordships will perceive, the museum would consist of nine large galleries, with the requisite supply of rooms for offices, a laboratory, and a workshop for the construction of mining and other needful models. According to estimates which have been prepared, and very carefully considered by the professional officer of this department, the cost of erecting the six houses and shops shown on the plan would be about 9,000 *l.*, that of the museum 20,000 *l.*

I state these details thus generally, in the first instance, as, in the event of your Lordships approving in principle of my suggestions, the whole subject of these buildings in connection with the estimates, and the purposes to which every portion would be applied, will, of course, be again brought under your Lordships' notice.

The whole of these buildings, I would submit to your Lordships, should be erected at one and the same time, under the superintendence of this department, and as the site is part of the hereditary property of the Crown, at the charge of its accruing land revenues. According to the estimates at present before me, the lettings to private tenants should contribute to the Exchequer rents amounting altogether to 740 *l.* a year; the museum not less than 800 *l.* For this second sum it would be necessary to make provision in the estimates annually submitted to Parliament by your Lordships' Board, for rents of offices and public buildings. Looking to the peculiar character of the larger portion of this return, viz., that it would be exempt from the liabilities to which property in the hands of a private tenant is ordinarily subject, and looking also to the increased value which such institution may reasonably be expected to confer on other and extensive property belonging to the Crown in the same vicinity, your Lordships will, I think, concur with me in opinion that the arrangement proposed is as consistent with a due administration of the land revenues of the Crown as any other that could be adopted.

In order, however, to render the Museum efficient in its twofold object of aiding and receiving aid from the Geological Survey of Great Britain, it will be necessary that the department upon which the illustration and practical application of its resources are so much dependent, should be strengthened by the services of a second chemist. The duties of chemist and curator are at present united in the person of Mr. Richard Phillips, whose skill in the department of mineral analysis is held in high and deserved estimation, but whose time, it may be sufficient to observe, is already engrossed either with his engagements at the Museum or in making analysis for the Excise and other public departments. The branch which I should assign to this new officer of the institution would be that of chemistry, in its application to agriculture, to manufactures, and to certain important branches of geological inquiry connected with the prosecution of the survey, for which no adequate provision is to be found in the existing arrangements of the Museum. The gentleman whose services I think it most desirable to secure for this appointment is Dr. Lyon Playfair, the pupil of Professor Liebig, and the representative of his opinions in this country in the department of Agricultural Chemistry.

The entire range and character of Dr. Playfair's investigations are in accordance with the objects and interests of the Museum, and his appointment, I feel assured, would be regarded with great satisfaction by agriculturists, by manufacturers, and indeed by all classes who attach importance to its proceedings.

From communications which I have had with Dr. Playfair on this subject, I have ascertained that although at the present moment having reference to other engagements which he must abandon, the acceptance of this appointment would subject him to some pecuniary loss, he would be prepared to transfer his services to the Museum for the sum of 250 *l.* per annum, upon the understanding, however, that if upon the death or resignation of Mr. Phillips, he shall have succeeded in organizing a body of competent pupil assistants at the Museum, he shall undertake the department allotted to Mr. Phillips, in addition to that which would now devolve upon him, at a salary of 400 *l.* per annum. I feel assured that it will be sufficient for me to state them, to induce your Lordships' acquiescence in these very reasonable proposals.

Of the commencement, the progress, and the ultimate suspension of the Geological Survey of Ireland, the particulars are already before your Lordships, in a report addressed to Sir Robert Peel in 1843 by Mr. Young, Captain Boldero and Lord Adare, subsequently printed and laid before both Houses of Parliament.

In conformity with the views that suggested its suspension, Captain James, of the Royal Engineers, an officer attached to the Irish Trigonometrical Survey, was directed in 1840 to place himself under and take part in the operations of Sir H. de la Beche, with the view to the establishment of a system of practical uniformity between the surveys of Great Britain and Ireland. From inquiries I have instituted, it appears that the first object of Captain James's mission has been accomplished, but that the Geological Survey

Survey of Ireland, with its several kindred branches of inquiry, is substantially at this moment in the condition in which I find it represented in the Report of 1843.

If I am right in this assumption, and it be your Lordships' desire that the survey be now proceeded with, upon the basis of and simultaneously with that of Great Britain, I can then have no hesitation in recommending to your Lordships, that the direction of both surveys should be committed, in the first instance, to one and the same person, that person being of course the Director of the British Survey, Sir Henry de la Beche. Attaching the highest value to his qualifications for the duties which such an office necessarily imposes (of which duties not the least in importance is that of educating and bringing forward a body of zealous and highly qualified assistants on the survey), I attach still greater importance to the principle of establishing that unity of action, of eliciting that uniformity of results, and of insuring that reciprocity of benefits between the surveys of the two countries, which can only be effected by placing the executive in both cases under the direction of one authority; and it is upon a concurrence, I presume, in the same views from parties of various opinions, and of high authority, on all branches of this inquiry, the Commissioners of 1843 recommended that the topographical geology of Ireland should be committed to Sir Henry de la Beche, as General Director of the Geological Department for the whole empire.

If your Lordships should concur in this opinion, and Sir Henry de la Beche should be appointed, it will follow that his time and attention must be divided between the two countries, and that there must be in each a local head to take the lead under his direction. From the testimony of several parties, with whom I have communicated (and I may state especially, Sir Henry de la Beche himself), I fully concur with the commission, that Captain James, of the Royal Engineers, should be employed as chief in Ireland.

This appointment, it is true, would be at variance with the principle which I understand to have been so forcibly urged by the Master General of the Ordnance, and fully assented to by your Lordships' Board, in regard to the detachment of military men from the proper duties of their station to others of a purely scientific character. In the present instance, however, seeing that Captain James has already qualified himself for the survey in direct communication with Sir Henry de la Beche, and the services proceeding under his direction, I think that the exception to the rule would be less injurious to the public service than its observance, and your Lordships, therefore, will prevail, I trust, upon the Master General, under the circumstances, to permit Captain James to be seconded, and his services upon the survey to be made available.

For the immediate assistant to and occasional substitute for Sir H. de la Beche on the English survey, I propose that your Lordships should authorise me to appoint Mr. Andrew C. Ramsay, at present one of the assistant geologists on the survey of Great Britain, upon a salary of 200 *l.* a year. Mr. Ramsay, I am informed, joined the survey in April 1841, and has distinguished himself by the extent of his information, and the accuracy of his views; he is a Fellow of the Geological Society of London, and is engaged in connection with Professor Forbes upon a new edition of the Rev. Mr. Conybeare's "Geology of England and Wales," a work esteemed of the highest authority in its day, and the revision of which has been especially committed to him by its author. The improvement in his position would call for no increase in the amount already suggested to your Lordships for the general purposes of the survey, and in itself would involve an addition to his present salary not exceeding 100 *l.* per annum.

With Mr. Ramsay as his assistant in Great Britain, I have no doubt whatever, that Sir Henry de la Beche would be enabled to devote an appropriate share of his time and attention to the Irish survey, and as far as may be dependent upon his exertions that both services will proceed with corresponding regularity and dispatch.

In order, however, as regards the Irish Survey, that these exertions may be duly supported, I should recommend that a vote of not less than 1,500 *l.* should be taken in the Estimates of the following and every future year, until the Survey of Ireland shall be completed. On reference to the Appendix to the Report of 1843, I find a letter from Sir Henry de la Beche, in which the sum of 1,500 *l.* is stated to be sufficient for this service, assuming the survey to be extended over a period of 10 years from the date of its resumption.

I enter entirely into the views which have suggested your Lordships' Minute of 27th ultimo, as to the establishment of a Museum of Economic Geology in Dublin. I feel assured not only that the existence of separate institutions in London and in Dublin will be a source of many positive advantages to both, but that the utility of such institutions is very mainly dependent upon their extension into different localities; the expansion of their stores from local sources; the discovery of new agencies, and the interchange of views and opinions, whether of local origin or otherwise, the existence of which cannot fail to elicit general results, and to promote the cause of general science.

It is upon these grounds, that looking to the institution already established in London as the model of that proposed to be founded in Dublin, I should, nevertheless, desire to see it placed under a superintendence in great measure separate and distinct.

Amongst the men of science in Ireland, whose opinions were consulted by the Commissioners of 1843, the subject of geology in its application to the development of mineral wealth, to agriculture, to the arts and manufactures, and, in short, to the general purposes of life, appears to have chiefly engaged the attention of Dr. Kane, a member of the Royal Irish Academy, and a chemist, as I am informed, of high and admitted authority in his profession. He attaches "the highest importance to the establishment in Dublin of a central Museum of Economic Geology like that in London," and his views, as detailed in Paper 8, Appendix 4, of the Report above referred to, points him out as the person apparently best fitted to take charge of such a collection. I would suggest, therefore, that Dr. Kane should be consulted as to his willingness to take upon himself the chemical section of the geological survey, under the direction of Sir Henry de la Beche; that he should perform the same duties in Ireland as I propose that your Lordships should devolve conjointly upon Dr. Playfair and Mr. Phillips in this country, and

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that for his services he should be paid a salary not exceeding 300*l.* per annum.

In order to obviate, however, the possibility of any misunderstanding hereafter upon points which may affect not only the personal interests of Dr. Kane, but those higher interests which, in the event of his appointment, would be committed in great measure to his keeping, I would suggest that your Lordships should authorise me to communicate with him forthwith as to his position, his duties, and his emoluments, under the proposed arrangement. It is indispensable, in fact, that I should be afforded the advantage of communicating with some person of scientific authority in Dublin (and with none of course could I so properly confer in the first instance as this gentleman), before I can in any way advise your Lordships as to the probable expense of maintaining an institution in that city, which, though founded upon the basis of the Museum in Craig's Court, may, from local causes only, require a somewhat different treatment.

It would afford me sincere pleasure, I need scarcely say, to be enabled in these communications to lay the basis of an arrangement for the working of the respective institutions in London and in Dublin, in accordance with each other, and with the great public objects which have suggested their establishment; and I trust that I shall be enabled to signify to your Lordships Dr. Kane's acceptance of the appointment of chemist and curator upon that basis, subject of course to the approval of your Lordships' Board.

It would then become expedient to make provision for the specimens already collected on the Irish Geological Survey which are at present deposited in Dublin, in charge with the Master General and Board of Ordnance, and which of course should be transferred to the custody of this Department, as soon as a proper building can be provided for their reception.

Although your Lordships inform me that you are prepared to defray the expense of providing a building for the purpose in Dublin, I would suggest that, among the public buildings in that city, there might be found accommodation that would suffice, for at least some period to come, for the collections already in store, and for any contributions that might accrue either from the Survey, from the Museum in London, or from private sources.

Your Lordships will probably see the expediency of instituting such inquiries in Dublin as may elicit full and specific information on the point to which I have adverted. I feel, indeed, that until this information shall have been acquired, and I shall have had an opportunity of communicating with Dr. Kane, with respect to the museum and its appointments, it would be of little avail for me to occupy your Lordships' attention with suggestions as to this portion of the larger subject referred to me by your Lordships' Minute of the 27th ultimo. In finally adverting, however, to that Minute, and to the confidence which your Lordships have been pleased to repose in myself, and the future chief Commissioners of this Board, in reference to the direction and control of the services which form the subject of this letter, I may be permitted, perhaps, to suggest to your Lordships, that our duties should be restricted within those limits; and that the receipt and issues of monies, the examination and payment of all demands, and the preparation of such general account at the end of the year as may be required by the Commissioners of Audit, should devolve in the usual course upon the Board.

I have, &c.

(signed) *Lincoln.*

Appendix, No. 7.

LETTER from the Earl of *Lincoln* to Dr. *Robert Kane*, dated 29 March 1845.

Office of Woods,
29 March 1845.

Sir,

Her Majesty's Government having determined upon resuming the Geological Survey of Ireland, in connexion with that which is now in progress in Great Britain, it has been decided to establish in Dublin a museum, showing the application of geology to the useful purposes of life, upon the basis of that in London, of which the management has been from its foundation under this Board.

The Geological Survey of the United Kingdom will be placed under the direction in chief of Sir Henry de la Beche, who will have for his principal assistant and representative in Ireland, Captain Henry James, of the Royal Engineers. The Museum of Economic Geology in Dublin I propose should be placed in charge with and conducted by you.

Materials for the foundation of such a museum have been, I am informed, collected at former periods of the Irish survey, and are deposited in Dublin with organic remains, and other specimens, also collected in that survey. These will, in the first instance, be transferred from the custody of the Master General and Board of Ordnance to that of the Chief Commissioners of Her Majesty's Woods, after which I should desire that they should be examined carefully by Sir Henry de la Beche and yourself, with a view to the immediate transfer to the museum of such as can be made available.

Enquiries are at present in progress for the purpose of providing a proper repository for these specimens, and for any others that may hereafter be collected on the Irish Geological Survey, or remitted as duplicates from London. I propose that the Repository should be divided into two portions, the one to be attached to and considered as in the custody of the director in chief of the survey, the other exclusively as your own.

To the former of these portions, I propose that all specimens should, in the first instance, be conveyed for classification and arrangement by its own officers, for its own immediate purposes, and that from time to time as these purposes shall, in the opinion of the director of the survey, have been fulfilled, such specimens as it is found can be dispensed with shall be transferred to and be placed under the immediate care of the director of the museum.

It is needless, however, for me, I feel assured, to enter into any minute specification of your duties. The application of such a collection as it is hoped may be eventually formed to the various purposes of mining, of agriculture, and of the arts, will present a field for analysis and illustration, the resources of which it will, of course, be your chief duty to explore, and ultimately to place before the public in such an intelligible and popular form as shall best accord with the objects of such an institution. It is, in fact, to this portion of your labours that the public attention will be necessarily in the first instance directed; and in this, speaking from an experience now of some duration, in the working of the institution in Craig's-court, in proportion to the zeal and judgment manifested in this department of your duties, will the progress of those labours be assisted by contributions from individual sources.

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In the conduct of that branch of the Geological Survey of Great Britain which relates especially to mines, it is understood to be the duty of its officers to examine the mineral views of given localities, and to record the mode of mining in various districts, and of preparing of the ores for the market; in short, their department is that of mining in the field, as distinguished from those analytical investigations and researches of which the laboratory is the proper and especial province. You will, therefore, understand that as the Geological Surveys of the two countries are to be conducted on the same principles, it will be necessary that their modes of proceeding should have the same established boundaries, and that in my definition of your duties, as Director of the Museum, I have had in mind this very necessary distinction.

In reference to the application of geology to the purposes of agriculture and the arts, I am not aware that between the director of the survey and of the museum, any difference of opinion can arise, as to the limits of their respective duties. The connection of the flora of Ireland with its pure geology would no doubt be asserted by the one, while its bearing upon agriculture and agricultural chemistry might, with equal justice, be maintained by the other. As regards the collection of specimens in the field, it is a duty which must in the first instance be committed to the hands of some person associated and acting very much in concert with the officers of the survey, and on that account therefore, if on no other, it would be better that he should be considered as more immediately attached to that branch of the service, be subject to the control of its director, and be maintained out of the

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funds provided for the general payment of the staff. As regards the subsequent arrangement and disposal of those specimens from time to time, it will be found to have been already in a former portion of this letter, provided for by regulations insuring the ultimate transfer of all such specimens to the museum.

It is obviously impossible for me at the present time, is so very early a stage of its progress, and in the absence of all information that would enable me to form an opinion of its probable exigencies, to suggest an estimate of what, in future years, may be an appropriate sum for the support of the museum. The sum which I have proposed in the annual estimates now before Parliament, is 800 *l.*, of which amount the Lords of the Treasury have authorised me to appropriate 300 *l.* for the salary of its director. The balance of 500 *l.* will be applicable to house-rent, and household charges, in the first instance, and subsequently to the proper services of the laboratory and the museum, including the remuneration of assistants, the carriage of specimens transmitted from the country, and every variety of incidental expenses under present circumstances, of the present time, I am induced to hope that the sum in question will be found sufficient for the expenses of the current year. In conformity with the regulations which prevail in the several civil departments of Government, the salary of the director will be paid on the 5th of January, the 5th of April, the 5th of July, and the 10th of October in every year. For incidental disbursements, he will, on requisition, be supplied with imprests on account, of the application of which he will have to render quarterly to the Chief Commissioner of this Board, statements, supported by vouchers, for every portion of his expenditure. The regulations of the Commissioners of Audit render it necessary that I should be thus explicit upon a point which I should otherwise have been content to leave very much to your discretion.

As regards the subordinate officers and assistants of the museum of whatever grade of service they may be, it will be necessary that the Chief Commissioner should be consulted, and the sanction of his authority obtained for each appointment. In London it has been usual in these matters, both with my predecessor and myself, to be very much guided by the opinion of the director, and I know of no circumstance that should induce me to desire, in the present instance, a deviation from the same practice. I am not aware that at the present moment I can usefully say more. I am indeed unwilling to extend the limits of my present communication beyond such an outline of the principles upon which the museum is to be conducted, and of the duties of its director, as may enable you to form an opinion of the appointment now offered for your acceptance. I should under any circumstances propose that at the end of the first six months, after entering upon the duties of his appointment, a full and circumstantial report of his proceedings in that interval should be laid before me, and upon this, and with such information as might in the mean time become available from other sources, it would obviously be far better for the public, as it would be more satisfactory both to him and to myself, to issue further and more definite instructions.

I have, &c.
(signed) *Lincoln.*

Dr. Robert Kane.

Appendix, No. 8.

ROYAL DUBLIN SOCIETY, &c.

COPY of INSTRUCTIONS to the COMMISSION appointed to Inquire into the ROYAL DUBLIN SOCIETY, the MUSEUM of IRISH INDUSTRY, and the System of SCIENTIFIC INSTRUCTION in *Ireland.* App. No. 8.

COPY OF TREASURY MINUTE, dated May 1862.

WRITE to the Vice-President of the Committee of Council on Education, that my Lords have had under consideration the several questions relating to the Royal Dublin Society which have been brought by the Science and Art Department to the notice of this Board. As regards the provision made in the Estimates for the repair and alteration of the buildings of the Institution, my Lords, concurring in opinion with the Lords of the Committee, have caused the items which have been proposed for their approval in the Draft Estimate of Public Buildings in Ireland to be transferred to the Estimate for the Science and Art Department, under the proper head; and their Lordships will intimate to the Commissioners of Public Works in Ireland that the works thus provided for, while they remain under the immediate direction of the Board of Works, are to be regarded as executed for the Department of Science and Art, with which department it will be proper that the Commissioners should hold such communication as is usual with other departments under like circumstances. My Lords are not prepared to assent to the proposal that a grant should be made by Her Majesty's Government equal to the capital value of the charge of 100 *l.* a year for rent which is payable by the Dublin National Gallery, in consideration of the Society undertaking to pay that rent for the future; for while, on the one hand, their Lordships do not admit the responsibility of providing this rent out of public funds, they observe that the revenues of the Society would be quite unequal even to its present expenditure without the aid of the Parliamentary Vote, the continuance of which for an indefinite time is therefore assumed in all arrangements which would add to existing charges; but this assistance from Parliament is not of a permanent character, but on the contrary is granted only from year to year, and cannot, therefore, be regarded in the light of a regular source of income.

The considerable expenditure which would be incurred in carrying out the improvements suggested by Captain Donnelly's inquiry, however judicious, is one which my Lords consider should be primarily provided for from local or private contributions, the aid of Parliament being resorted to only for the completion of the funds required, upon the testimony, which such contributions alone can afford, that the objects to be obtained are appreciated by those who should be best able to form an opinion respecting them.

My Lords concur as to the expediency of instituting an inquiry into the system and constitution of the Royal Dublin Society, with the view of ascertaining whether any changes might be made, having for this object to provide for the more efficient administration of the affairs of the Society by its Council, and to increase the control of the Superintending Public Department over the general management. A satisfactory settlement of such matters might, it appears to my Lords, be properly made a condition of the continuance of the public aid now given to the institution, and would seem to be called for by the statement of Captain Donnelly as to the want of power in the Council as the administrative body of the Society.

COPY of TREASURY MINUTE, dated July 1862.

MY LORDS resume the consideration of the several questions relating to the Royal Dublin Society, which were brought under the notice of this Board by the letter of the Vice-President of the Committee of Council on Education of 26th February last. My Lords, by their Minute of May, and with reference to the Report made by Captain Donnelly, dated 11th December 1861, transmitted in Mr. Lowe's letter of 26th February, expressed their concurrence in the expediency of instituting an inquiry into the system and constitution of the Society, with the view of ascertaining whether any changes might be made, having for their object to provide for the more efficient administration of the affairs of the Society by its Council, and to increase the control of the Superintending Public Department over the general management; adding that a satisfactory settlement of such matters might be properly made a condition of the continuance of the public aid now given to the Institution, and would even be called for by the statement of Captain Donnelly as to the want of power in the Council as the administrative body of the Society. As the Royal Dublin Society is a chartered body, and as several of its functions (such as those connected with the drawing school, botanic garden, &c.) involve trusts created by Acts of Parliament, and as consequently it is probable that, in order to effect the object now in view, an alteration in the charter of the Society, and possibly also alterations in the Acts of Parliament referred to, may be found necessary, it appears to my Lords desirable that the inquiry should be intrusted to gentlemen

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whose position and knowledge of the constitution of the Society and of its working will facilitate a full and complete investigation, and lead to the satisfactory settlement adverted to in the Minute of 26th February. My Lords, therefore, propose that the following gentlemen be requested to undertake the inquiry:—The Right Honourable P. Blackburne, Lord Justice of Appeal; Sir R. Griffith, Bart., Chairman of the Board of Works; Sir C. Trevelyan, K.C.B.; Captain Donnelly, R.E. In considering the constitution of the Royal Dublin Society, its relations with the different departments, and the means of placing it in a more satisfactory position as regards its museum and the other branches stated by Captain Donnelly to be incomplete, it would be within the province of the Commissioners to review the arrangements made in 1854 as regards the administration of the Votes for the Royal Dublin Society and the Museum of Irish Industry, as set forth in the correspondence published with the Estimates of 1854–5. In the Estimates for the present year, a sum of 7,017 *l.* is taken for the Royal Dublin Society, a sum of 5,062 *l.* 16 *s.* for the Museum of Irish Industry (including provincial lectures), making together 12,079 *l.* 16 *s.* for objects of a cognate character, and under the direction of the same department of Government. It would be for the Commission to consider and report whether the public advantages, which form the object of these two institutions, might not be more effectually attained by a simplification of arrangement, and whether, at the same time, a reduction in the permanent annual charge might not be effected, while the better working of both institutions and the proper control of the Superintending Departments of Government might likewise be more effectually provided for. In connection with these two institutions, the institution and working of the Committee of Lectures might be usefully inquired into by the Commission. There are two other institutions in Dublin connected intimately with the subject-matter of the inquiry: the National Gallery, now in progress of completion, and the Royal Hibernian Academy. The former of these institutions has been built on the premises belonging to the Royal Dublin Society, liable to a rent of 100 *l.* a-year; and a question has been raised as to redemption of this rent by a grant, in order to purchase other premises contiguous to the Royal Dublin Society, as explained in Captain Donnelly's Report. Although erected entirely at the public expense, it is vested in trustees by Act of Parliament.* The latter is supported to a considerable extent by an annual vote. My Lords have expressed their opinion that the proposed redemption of the rent payable by the National Gallery, in order to the acquisition of the premises proposed to be purchased, would not be a desirable measure; but they think this occasion would be a fitting one for inquiring whether these two institutions, with objects in close affinity with those of the Royal Dublin Society and the Museum of Irish Industry, might not, with advantage to them and efficiency and economy to the public, be brought, with the last-mentioned institutions, under one management and control.

Transmit a copy of this Minute to the Vice-President of the Committee of Council on Education, requesting the concurrence of the Committee in the appointment of Captain Donnelly, and requesting also to be favoured with any observations the Committee of Council may have to make with reference to the proposed inquiry; and stating, further, that it appears to my Lords that the appointment of a Secretary to the Commission will be unnecessary if Captain Donnelly would be so good as to undertake to keep the necessary record of the proceedings of the Committee.

* 17 & 18 Vict. c. 99. 18 & 19 Vict. c. 99.

The Right Honourable *R. Lowe* to the Secretary of the Treasury.

Sir, 21 August 1862.

With reference to the Treasury Letter of the 30th ultimo, my Lords fully concur in the appointment of Captain Donnelly to serve as a Commissioner, and to act as Secretary to the Commission of Inquiry into the Royal Dublin Society.

In reply to the request to be favoured with any observations, my Lords suggest that particular inquiry should be made into the working of the various scientific classes attached to the Museum of Irish Industry and Royal Dublin Society, with the view of ascertaining if any sufficient grounds exist for subsidizing the Professors, and thus making such classes in Dublin an exception to all others in the United Kingdom, and somewhat inconsistent with the general system of aiding science by payments on results.

My Lords incline to the opinion that such classes, if they are wanted, should be supported by fees and local subscriptions.

The Professors at the Museum of Irish Industry have been accustomed, as part of their duty, to make scientific investigations for the Irish Government and others. It would seem to be better, when such services are required, to remunerate them by piecework rather than have a special salaried officer.

In respect of the scope of action of the Royal Dublin Society, it seems desirable that some regulations should be laid down, and that the Society should not be able to claim the absolute right of entering upon new branches of work without the concurrence of the Government.

The funds of the Society, from whatever sources they may be derived, should be treated as a whole, and the specific appropriation of them should be subject to the control of the Government.

Parliamentary Votes in aid of Science and Art are made to other institutions in Dublin besides those named in the Treasury Minute.

It would seem to be worthy of inquiry if it might not be possible to pay such Votes through the Royal Dublin Society, and thus effect an improved superintendence over the application of them.

I am, &c.
(signed) *Robert Lowe.*

The Secretary,
Her Majesty's Treasury.

Mr. *G. A. Hamilton* to Captain *Donnelly.*

Sir, Treasury Chambers, 26 September 1862. App. No. 8.

I AM directed by the Lords Commissioners of Her Majesty's Treasury to transmit herewith, for the consideration of the Commissioners of Inquiry into the Royal Dublin Society, copy of a letter from the Science and Art Department, containing observations relative to the subjects to be investigated by the Commissioners; and I am to authorise them to extend their inquiries, as suggested by the Vice-President of the Committee of Council on Education.

I am, &c.
(signed) *G. A. Hamilton.*

Captain Donnelly,
Science and Art Department, Kensington.

Appendix, No. 9.

PAPER handed in by Captain *Donnelly,* 27 June 1864.

DEPARTMENT OF SCIENCE AND ART, MARLBOROUGH HOUSE, January 1854. App. No. 9.

MEMORANDUM on the PROMOTION of SCIENCE and ART in *Ireland,* by Mr. *Cole.*

1.—IT appears to me that whilst Dublin, as the capital, will always be regarded as the culminating point where the highest kind of instruction in science and art will be sought, and should be afforded in Ireland, the arrangement for promoting industrial instruction in Dublin ought not to be separated from the promotion of such education as a *national system* throughout the whole of Ireland. I have therefore been led to form my conclusions with reference to the whole subject, and I do not limit their application to Dublin only as a separate locality.

2. The arrangemants for national education in Ireland are so well organized and complete in the national and training schools in the Queen's Colleges and in the Queen's Universities, and appear to be so capable of being easily and economically expanded, with the view of comprehending ample instruction in science and art, that I conceive it will be found more expedient to connect such instruction with the existing institutions, than to attempt to create separate foundations. Indeed, elementary scientific instruction on many subjects is already given in the primary schools, and agriculture is taught and practised in the normal school at Glasneven, whilst professorships of agriculture and engineering are founded in the Queen's Colleges; and, moreover, examinations are passed in those subjects in the Queen's Universities. The practice of various branches of industry is also actually carried on in the schools attached to the Poor-law Union workhouses.

3. In addition, although not connected, at present, with this system of national education, there are four grant schools of designs at work, at Dublin, Belfast, Cork, and Limerick, and one self-supporting school at Waterford, as well as professorships of applied science in the Royal Dublin Society. Instead of encouraging further disunited action, it appears to me that the proper course will be to bring the system of industrial education into a unity, and to connect it with the system of national education.

4. I proceed to class my remarks under, 1st, the primary; 2d, the secondary; and 3d, the higher course of instruction.

5. (1st). — As respects *primary instruction.* From the inquiries I made at the National Board of Education, I have reason to think that the Board will readily enter into communication with the Department in order to encourage science and art. I find that drawing is already taught at the model school in Marlborough-street, Dublin, and even in some of the training schools of the National Board. The mode of instruction adopted has some of the principal features of that recommended by the Department, and might easily be made the same. The National Board teaches practical agriculture, not only in its normal school at Glasneven, but in several agricultural schools in the provinces, and might easily take up other branches of industrial training, if desirable. It seems to me, therefore, that the extension of primary industrial instruction throughout Ireland, in connection with existing schools and establishments, only depends upon the development of the Department itself, and that there are no difficulties in the way.

6. (2d). As respect *secondary instruction* and *instruction for artisans,* the foundation of the model schools under the Education Board will furnish I think, excellent local centres for this instruction. Already there are model schools at Athy, Ballymena, near Belfast; Ballyboro', near Cavan; Clonmel, Coleraine, Dunnanway, Galway, Newry,

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and Trim; and other schools are in prospect at Belfast, Cork, Dublin (a railway and adult school), Limerick, and Waterford; and I apprehend there would be every willingness to make the necessary arrangements. Those rooms of the model schools which are not used in the evening, would seem to be easily applicable for the purpose of special instruction in science and art for adults.

I would recommend that future schools of art and science to be established, should be connected with the model schools. I believe experiments may be shortly made, with the concurrence of the National Board of Education, at Clonmel and elsewhere. These schools might also be the local centres from which Art instruction might be afforded to the numerous lace schools already existing in considerable numbers, and largely increasing. Some time ago, the Board of Trade directed the head master of the Dublin School of Art to visit the Carrickmacross School, as the centre of several lace schools, and granted 200*l.* for the purpose, but the distance being about 50 miles, prevented the arrangement from being made permanent. The Training Schools, however, would afford means of giving this instruction. As a measure of economy, as well as efficiency, it might probably be found expedient to connect even the existing schools of art with these training schools.

7. (3d.) As respects the *highest class of instruction*, the colleges at Belfast, Cork, and Galway seem to present admirable facilities in respect of buildings, apparatus, &c., for promoting it. Numerous professors of science are already attached to them, and probably the addition of professors of technology, of architecture and art applied to industry, which the existing letters patent give the power of creating, would accomplish all that the Department has in view. It appears to me very desirable, that in these places any schools of art or science should be under the direction of the professors of the college. I apprehend that such relations might be established between the colleges and Department as would not interfere with existing arrangements and responsibilities. In the colleges the collegiate responsibility, of course, would remain intact, whilst the Department would simply appoint the masters of the local school of secondary instruction, subject to the direction of the professors of the college, and would thus secure the advantage of their superintendence.

8. My inquiries lead me to conclude that there would be no difficulties in attending the examinations and honours of the Queen's University already applicable to agriculture and engineering, to other subjects of industrial education.

9. By such a united action between the national schools, the training schools, the colleges, and the Queen's Universities, I feel persuaded a complete course of industrial education might be secured to the whole of the Irish people; probably much more perfect, as a system, than could be established in England or Scotland.

10. But still a culminating point for industrial education would be necessary, as it is for medicine, law, &c. Students are prepared at the Queen's Colleges for the faculty of medicine, but they come to Dublin to complete their course at the hospitals, &c. And so should the student of industrial science and art. In Dublin he should be able to find the highest technical instruction, with access to museums, and collections larger and more complete than could be found in the provinces, and I therefore think that a special college for applied science and art in union with the existing institutions would have to be created in Dublin. There are already materials for founding such an institution on the objects of which a large expenditure already takes place, but the action is dispersed and ill-defined.

11. (*a*).—There is the Museum of Irish Industry, and which is also the central office of the Geological Survey, with its professors of chemistry, and its collections supported by public funds directly responsible to Government.

11. (*b*).—There is the Royal Dublin Society, with its professors of chemistry, natural history, &c., with botanic gardens, partial museums, &c., supported in the main by Parliamentary funds, but arranged by a society of private gentlemen under a council and committee, and very imperfectly responsible for the administration of the public money, which has averaged for many years 6,000*l.* a-year. The professors are elected by the society at large. The anomalous position of this society has frequently excited the attention of Parliament, and of the Irish Government, as shown by the report of a Committee which sat in 1836, Parliamentary Paper, No. , and a Commission appointed in 1842, and as shown in an accompanying paper prepared by Major Larcom.

13. The School of Art attached to the Royal Dublin Society is supported by a Parliamentary grant of 500*l.* a-year, whilst about the same sum is allocated by the Royal Dublin Society from its other Parliamentary grant. The head master of the school is appointed by Government, but the other masters are appointed by the society. The present state of this school is most unsatisfactory, and is described in a report by Mr. Redgrave.

14. There is the Royal Hibernian Academy, which receives 300*l.* per annum from Parliament, and is, apparently, subject to no Parliamentary responsibility.

15. There is a Normal Lace School for supplying teachers to provincial schools seeking public aid. The Lord Lieutenant has recommended that it should receive a grant of 200*l.* This institution is certainly doing great good; but is struggling against difficulties; if any assistance is afforded to it by Parliament, it would seem that the school should form part of a general plan.

16. And, lastly, there is the Zoological Society, a popular institution, which, in addition to the scientific and practical uses of such institutions, is of great interest to the working people. This society complains justly that, whilst the Botanic Gardens are supported by the public purse, no assistance is given in promoting the study of zoology.

17. It appears to me that, if public money is to be applied in support of these several institutions, all of which have a direct bearing upon the promotion of science and art, it is necessary that they should be re-organised on a sound basis, and connected with the department, and be administered, subject to proper responsibility, to Parliament. At present, the relations between the Museum of Irish Industry and Royal Dublin Society

Society seem very anomalous, and public money is devoted to promoting two institutions, in some respect, competing.

18. It will not be disputed that it is undesirable to have two centres of action in Dublin supported by public funds, ostensibly promoting the same objects. It, therefore, becomes necessary to elect one, and it must naturally be that which ensures the highest amount of responsibility to Parliament, and is capable of being connected with the general system provided by the National Board and the Queen's Colleges and Universities. As a first step, it appears desirable to separate the lines of action between the Museum of Irish Industry and the Royal Dublin Society. This may be done, I think, without difficulty by confiding the promotion of direct instruction to the proposed college and the administration of certain public exhibitions to the Royal Dublin Society. The Museum of Irish Industry would then become the College of Science and Art in Dublin, having charge of the administration of direct instruction, and representing the department in the capital.

19. The extent, organisation, and development of this central college will have to be examined hereafter. It is only necessary to observe that the superintendence of it would necessarily engage the full services of the principal, and require his constant supervision.

20. I would propose that no public funds voted to the Royal Dublin Society should be applied to those branches of instruction administered in the special college. But it seems to me to be for public advantage that public grants should continue to be voted to the Royal Dublin Society in promoting certain objects which partake of the nature of public exhibitions, such as the Botanic Gardens, a Zoological Museum, a Gallery of Fine Arts, and an Agricultural Museum. Arrangements should be made for extending these departments, and placing the administration of them on a sound and responsible basis in connection with the Department, bearing in mind that they should be made conducive to the objects of the special college and the interests of all Ireland.

Note. — Would not the geological and perhaps the (*a*) , and perhaps the natural history, and perhaps the statistical societies, be also affiliated to the Royal Dublin Society? That society has already sections devoted to those subjects, and the societies in question are so far analogous that they are governed by councils; they none of them receive grants at present; the Dublin society would thus become a general institution, a (*b*) to the instructional establishments; and arrangements might be made for affiliating to it future societies of the same class if such should arise. Some change in its government might possibly be ventured upon, as a Board of visitors, perhaps.

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(*b*). Illegible.

21. In carrying out the arrangements proposed, probably some officers of the Royal Dublin Society could be dispensed with; some of these have been for a long while attached to the institution, and would perhaps be considered eligible for compensation.

22. If public funds continue to be voted in support of the Botanic Gardens, then the zoological and other, as before adverted to, societies, I submit, should have some assistance from Parliament, on condition of its collections being made useful for the objects of the college.

23. The School of Art and the Normal Lace School should be attached to the college, and subject to the superintendence of the director.

24. The Museum of Irish Industry would be attached to the Central College, and become a Museum of Science and Art applied to industry.

25. The extent to which public money should be voted in support of the Botanic Gardens and Zoological Gardens could probably be best determined after a scientific report had been made on their present condition and wants; and perhaps Sir William Hooker and Professor E. Forbes, as Government officers, would make such reports.

26. The examinations and degrees of the Queen's University would, I apprehend, be applied to the students of the proposed Central College, or the certificate of the Central College be required by the Senate before conferring degrees or granting diplomas.

27. By these means, on the one hand, very ample provision would be made for supplying industrial instruction throughout all Ireland; and on the other, without interfering with the constitution of an old-established society, the Royal Dublin Society would be relieved of the duties of affording instruction, whilst its influence would be greatly extended by the increased importance which would be given to its public exhibitions of botany, horticulture, agriculture, zoology, and the fine arts.

(*a*). Illegible in the original.

28. If these principles and the course of action be approved, I shall be prepared to submit the details by which I conceive they may be carried into effect.

Appendix, No. 10.

PAPER handed in by Mr. *M'Evoy*, 28 April 1864.

App. No. 10.

SELECTION from the NAMES of Signers of the PETITION against the Abolition of the IRISH INDUSTRIAL MUSEUM, and for a Parliamentary Inquiry into all the subsidized Institutions of *Dublin*.

PROVINCIAL TOWNS.

Ballymoney (County Antrim), Town Commissioners of, per David Wilson, esq., chairman.

Dundalk, Local Petition from, per Nicholas Carolan, esq., merchant.

Limerick Athenæum, per C. Dawson, esq., secretary.

Maryboro' (Queen's County), Town Commissioners of, per John Jacob, esq., M.D., chairman.

Tralee, Local Petition from, per John S. Walsh, esq.

Waterford Mechanics' Institute, per J. Power, esq., hon. secretary.

Rathkeale (County Limerick), Town Commissioners of, per Stephen Casey, esq., town clerk.

Drogheda, Local Petition from, signed by Mayor and other inhabitants.

Gliford (County Down), Town Commissioners of, per Henry H. Hunter, esq., town clerk.

Omagh (Board of Guardians), per James Young, esq.

Cork,—Petition numerously signed by leading merchants and others of high position, forwarded by Wm. Dowden, esq., to J. F. Maguire, esq., M.P., for presentation.

Clonmel,—Local Petition promoted by the Clonmel Mechanics' Institute, P. Purcell, esq., secretary.

Ballyshannon, County Donegal,—Petition from Town Commissioners of, per Mathew Mulhern, esq., chairman.

Croom (County Limerick), Local Petition, promoted by T. Wade, esq., Croom.

Bandon, Local Petition from, promoted by John Conolly, esq., Cork-road, Bandon.

The Press of Dublin and the Provinces.

Articles against the abolition of the Irish Museum have appeared in the Dublin newspapers in the following order:—*The Morning News* (Roman Catholic and Liberal), *The Medical Press* (Non-political), *Evening Post* (Roman Catholic and Liberal), *The Builder* (Non-political), *Freeman's Journal* (Roman Catholic and Liberal), *Irishman* (Liberal), *Irish Times* (Protestant), *The Nation* (Roman Catholic and Liberal), and *Saunders'* (Non-political), has favoured the views of the committee by inserting several letters from the honorary secretary and other members of the committee.

The Dublin Evening Mail (Protestant and Conservative) has not pronounced either way;* *The Daily Express* (Protestant and Conservative) is the only Dublin journal in which an article in favour of the abolition has appeared and that one has been *followed by anonymous letters against the project.*

The provincial press, so far as heard from, are no less decidedly opposed to the report of the late commission. Articles against it have appeared in the *Cork Examiner* (Roman Catholic and Liberal), *Connaught Patriot* (Roman Catholic), *Drogheda Argus* (Roman Catholic and Liberal), *Cork Reporter* (Roman Catholic and Liberal), *Galway American* (Liberal and Industrial), and *The Galway Vindicator* (Roman Catholic and Liberal) has reprinted papers issued by the committee; while *not one* provincial paper we know of has supported the abolition project.

* Mr. W. G. Crory, a contributor to the *Mail*, has signed the petition.

Appendix, No. 11.

PAPERS handed in by *F. J. Sidney*, LL.D., 12 May 1864.

1 8 6 3.

Committee of Council on Education.—Science and Art Department. App. No. 11.

COMMITTEE OF LECTURES—IRELAND.

The Right Hon. Maziere Brady, M.R.I.A.
The Chief Secretary, or, in his absence, the Under Secretary.
Sir Richard Griffith, Bart., LL.D., F.R.S., M.R.I.A.
Sir Robert Kane, F.R.S., M.R.I.A.
The Lord Talbot de Malahide, V.P.R.D.S., M.R.I.A.
The Right Hon. Francis Blackburne, LL.D., V.P.R.D.S., M.R.I.A., Lord Justice of Appeal.
Rev. Humphrey Lloyd, D.D., V.P.T.C.D., F.R.S., V.P.R.D.S., M.R.I.A.
The Rev. Joseph A. Galbraith, F.T.C.D., M.R.I.A.

Frederick J. Sidney, LL.D., M.R.I.A., Secretary.

REGULATIONS to be observed in Applications for the delivery of Courses of Lectures on Science in Provincial Towns in Ireland.

THE committee appointed for administering the Parliamentary Grant for lectures in provincial towns in Ireland, will receive and consider applications from local bodies or institutions, for the delivery of such courses, under the following regulations:—

1. All applications to be sent in to the committee on or before the 31st day of March in each year.

2. It is desirable that the provincial lectures should be delivered, as far as possible, between the months of May and November.

3. The application is to specify, in a printed form which will be supplied by the Secretary, the subject or subjects of the proposed course of lectures, the estimated number of persons expected to attend, the place where, and the time at or about which, it is desired that the lectures should be given.

4. In order to manifest the interest taken by the locality in the proposed course, a local subscription of 10*l.* is required, which must be deposited with the Secretary of the Committee before the delivery of the course is authorised.

5. The amount and appropriation of the fees to be received for attendance on the lectures shall be decided by the local committee.

6. In order to provide for the free admissioo of the pupils of national schools, and of the working classes, arrangements may be made by the local committee for a certain number of free admissions to each course of lectures.

7. The local committee will be required to take all necessary steps, by advertisements in the public newspapers and otherwise, for giving due publicity to the intended course. All expenses of local arrangements and advertisements are to be defrayed by the local committee.

8. Every syllabus and other public announcement relating to the lectures to be headed, "Science and Art Department, Committee of Lectures, Dublin Castle."

9. All apparatus and diagrams which may be requisite, are to be supplied by the lecturer. The committee will deem it right to inquire into the nature of the apparatus and means of illustration provided for the course previous to authorising its delivery.

10. Every course of provincial lectures shall consist of at least nine lectures, and shall extend over a period of three weeks, each lecture being of not less than one hour's duration.

11. After each course of lectures an examination will be held, and prizes in books will be awarded to all candidates whose answering may merit the distinction.

12. The main object of the provincial lectures being to afford an opportunity of acquiring useful elementary knowledge in science to those who have no other means of obtaining it, and the results of the examination affording the only test of the success of the course in this respect, it is expected that every effort will be made by the local committee to form a select class of students, who will *bonâ fide* pre-

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pare themselves for the examination by diligent attendance at the lectures, and by procuring and studying the text books recommended by the lecturers.

13. On the completion of each course of lectures a full report, according to a printed form, which will be supplied by the Secretary, shall be sent to the committee by the body from whom the application came, stating the number of lectures delivered, the number of persons attending each lecture (of which an accurate register must be kept), a list of the donations received in aid, and the amount received for admission fees, the number of free admissions, and any other information likely to be useful.

14. A report will also be required from the lecturer on the conclusion of the course, containing such information on the foregoing points as he may be able to give, and also informing the committee as to the facilities afforded by the locality for lectures.

15. The committee reserve to themselves exclusively the nomination of the lecturer, and will not, under any circumstances, sanction any previous engagement with a lecturer.

Lecturers.

William H. Baily, F.G.S., Geological Survey of Ireland.
John Barker, A.B., M.D., M.R.I.A., Curator of Museum of College of Surgeons.
William Barker, M.D., M.R.I.A., Professor of Physical Science in the Department of Science and Art.
John Blyth, M.D., Professor of Chemistry, Queen's College, Cork.
Charles A. Cameron, M.D., PH.D., M.R.I.A., Professor of Chemistry, and Public Analyst to the City of Dublin.
Edward S. Clarke, M.D., M.R.I.A., Lecturer on Natural Philosophy, Chemistry, and Physiology, to the Commissioners of National Education.
Edward Divers, M.D., F.C.S., Professor of Materia Medica, Queen's College, Birmingham.
Edmund William Davy, A.B., M.B., M.R.I.A., Professor of Agricultural Chemistry to the Royal Dublin Society.
John England, A.B., Professor of Natural Philosophy, Queen's College, Cork.
Joseph Reay Greene, A.B., Professor of Natural History, Queen's College, Cork.
Robert Harkness, F.R.S.E., F.G.S., Professor of Geology and Mineralogy, Queen's College, Cork.
William H. Harvey, M.D., M.R.I.A., Professor of Botany to Trinity College, and to the Department of Science and Art.
John F. Hodges, M.D., Professor of Agriculture, Queen's College, Belfast.
J. Beete Jukes, M.A., F.R.S., M.R.I.A., Professor of Geology in the Department of Science and Art, and Local Director of the Geological Survey of Ireland.
Henry Lawson, M.D., Professor of Physiology, Queen's College, Birmingham, and Lecturer in Zoology.
William King, Esq., Professor of Mineralogy and Geology, Queen's College, Galway.
Alexander G. Melville, M.D., M.R.I.A., Professor of Natural History, Queen's College, Galway.
Edmund Murphy, A.B., T.C.D., Professor of Agriculture, Queen's College, Cork.
William Lover, M.D., Lecturer on Natural Philosophy.
Thomas H. Rowney, PH.D., F.C.S., Professor of Chemistry, Queen's College, Galway.
Robert H. Scott, M.A., M.R.I.A., Secretary to the Geological Society of Dublin, and Lecturer in Mineralogy to the Royal Dublin Society.
George F. Shaw, LL.D., F.T.C.D.
Thomas Skilling, Esq., Professor of Agriculture, Queen's College, Galway.
William Edward Steele, M.D., Royal Dublin Society.
John Stevelly, LL.D., Professor of Natural Philosophy, Queen's College, Belfast.
W. K. Sullivan, PH.D., M.R.I.A., Professor of Chemistry in the Department of Science and Art.
Wyville Thompson, LL.D., Professor of Geology and Mineralogy, Queen's College, Belfast.
Edward Percival Wright, M.B., M.R.I.A., Lecturer in Zoology, and Director of the Museum of Trinity College, Dublin.

16. All communications are to be addressed to "The Secretary to the Committee of Lectures, Chief Secretary's Office, Dublin Castle."

Subjects for Lectures.

NATURAL HISTORY:

1. Geology (Physical).
   „ (Palæontological).
2. Physical Geography.
3. Botany (Introductory and Systematic).
   „ (Agricultural).
4. Zoology.

CHEMISTRY:

1. Systematic and Experimental.
2. Applied to Agriculture.
3. „ Arts and Manufactures.

NATURAL PHILOSOPHY:

1. Mechanics.
2. Hydrostatics and Pneumatics.
3. Optics and Acoustics.
4. Heat and the Steam Engine.
5. Electricity and Magnetism.
6. Astronomy.

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1862.

Committee of Council on Education.—Science and Art Department.

Committee of Lectures—Ireland.

Queries to be answered by Applicants for Lectures in Provincial Towns, and returned as soon as possible.

No engagement or negociation with a Lecturer, on the part of Applicants, will be sanctioned by the Committee.

1. Name of town for which application is made, and the computed number of its inhabitants? - - -

2. State by what institution or committee the application is made - - - - - - - - -

3 In order to give the Committee an alternative in case of need, please to state upon which two or more of the following courses of Practical Science are Lectures most desired, placing them in the order in which they are preferred - - - - - - - -

Natural History:

1. Geology (Physical) - - - - -
2. „ (Palæontological) - - -
3. Physical Geography - - - - -
4. Botany (Introductory and Systematic) -
5. „ (Agricultural) - - - -
6. Zoology - - - - - - -

Chemistry:

Systematic and Experimental - - -
2. Applied to Agriculture - - - -
3. „ Arts and Manufactures - -

Natural Philosophy:

1. Mechanics - - - - - -
2. Hydrostatics and Pneumatics - - -
3. Optics and Acoustics - - - - -
4. Heat and the Steam Engine - - -
5. Electricity and Magnetism - - - -
6. Astronomy - - - - - -

4. Estimated number of persons expected to attend - -

5. In what building is the Course to be delivered? - -

6. At what time is it desired that the Course should be delivered? - - - - - - - -

7. What charges are intended to be made for admission, and what arrangements, if any, for free admission? -

8. Is it intended to form Classes for Instruction in the subject of the proposed Course, and have any steps been as yet taken in reference thereto? - - -

9. Give the name and address of the Secretary to the Local Committee or Institution - - - - -

General Observations.

We, the undersigned, request the Committee of Lectures will appoint a Lecturer to deliver one of the Courses above-mentioned, and at the period stated, or as nearly thereto as may be practicable and convenient; and we engage to lodge forthwith the sum of 10*l.* to the credit of the Committee, as directed in the Regulations.

Dated this day of 186 .

Signatures of Applicants. - -

_____

_____

_____

_____ Secretary.

To the Secretary to the Committee of Lectures,
Chief Secretary's Office, Dublin Castle.

Department of Science and Art.—Committee of Lectures—Dublin Castle.

REPORT of the Committee of Lectures to the Lords of the Committee of Privy Council on Education for the Year 1860.

The committee have to report that the usual courses of lectures have been given by the professors of the Department in the theatres of the Royal Dublin Society and Museum of Irish Industry (Appendix I). Ten courses of lectures have also been given in provincial towns, followed, as usual, by examinations, the particulars of which are given fully in Appendix II.

The committee have turned their attention to the establishment of local schools, under the regulations set forth in the Science Directory, issued by the Department of Science and Art, but have as yet failed to find any resident local teachers to undertake the work. They have, however, in the meantime, in order to carry out this object as far as possible, employed a qualified teacher in chemistry, whom they have sent to three towns in succession (Limerick, Clonmel, and Cork), leaving him for a period of upwards of three months in each, in order to prepare a class for the annual examination of the department. The attendance at Limerick was small, which is partly attributable to the period of the year at which the course was given. That at Clonmel was considerable, and an examination has been held there by the department, which has exhibited highly satisfactory results; out of 39 candidates, 35 passed; 20 of them took Queen's prizes, seven, first grade, seven, second, and six, third. The course at Cork is at present in progress.

The committee have experienced some difficulty in establishing schools of this nature. Besides the difficulty of procuring qualified teachers, they find that local committees and institutes, which, in this country, have generally but a struggling existence, are unwilling to undertake the responsibility and incur the expense of providing suitable rooms and other essentials for keeping the schools open for a lengthened period. The receipts are very moderate, the fees being necessarily low, and the average number of pupils who will work continuously and steadily being small. A serious objection to the present arrangement arises from the long interval which must elapse between the instruction given by the teacher in the first, and, even in the second, of the three towns, and the annual May examination, it being nearly impossible, in the absence of the teacher, to keep up the stimulus, and induce the students to read on for an object so remote. This objection, the committee hope, in some

some degree, to meet during the present year, by sending the teacher to only two towns, and leaving him for a longer period in each. They expect to be enabled to do this, as they have secured the services of a second teacher. The difficulty in the way of establishing schools is also much enhanced by the regulations of the department, which though, perhaps, very suitable to England, seem scarcely adapted to the present social condition and state of education in this country. Elementary education has not yet advanced sufficiently among the humbler classes to spread among them either the desire or the ability to study such subjects as come within the action of the department. This country being chiefly agricultural, and manufactures being as yet but slightly developed, that large class, known in England as operatives and artisans, and to whom the department chiefly addresses itself, may be said to have but a limited existence here. Accordingly, the rule which limits the benefits of the science minutes, at least so far as the teacher's remuneration is concerned, to operatives and their children, virtually excludes most of those whose previous general education would qualify them to derive benefit from instruction in scientific subjects. Among those who have availed themselves of the instruction given under the directions of the Committee, no inconsiderable proportion consists of children of country shopkeepers, farmers, and other persons of small means, who, while their whole annual income in many instances, probably does not exceed that of a well-paid English operative, and while they must either obtain instruction of this nature for their children, through the machinery brought home to their doors by this Committee, or be wholly debarred from it, are yet unwilling to rank themselves as operatives or artisans, even if they could be brought within the meaning of these terms as defined by the department.

Short courses of public lectures, followed, after an interval, by an examination, as carried on by this Committee during the last few years, appear to be well suited to the present condition of the country, and calculated to draw public attention to the subject, and likely gradually to open the way to the introduction of a system more in accordance with the views of the department. The answering at the examinations has shown that, in many instances, a considerable amount of continuous attention and study has been given by the students to the several subjects; but the indirect results which have followed, and which cannot be measured by statistical returns, appear to be not the least important of their effects. These courses (which have long been an institution in this country) have been the means of largely increasing the usefulness of local literary and scientific institutions, and mechanics' institutes, perhaps even of keeping them in existence. They have led to the establishment of these useful institutions in places where they previously did not exist, as, for instance, at Portlaw (*see* Report in Appendix III). That a public want is met by these lectures, is evidenced by the unanimity of sentiment manifested in the large body of reports inserted in Appendix III., and which were sent in answer to a circular from this Committee, addressed to the different local institutions, requesting their opinion as to the utility or otherwise of these lectures founded on the experience of past years. From the Report of Sir John Young, president of the Ballieborough Literary Society, and late Chief Secretary for Ireland, a gentleman intimately acquainted with the social circumstances and wants of this country, they extract the following passage:—

"I may safely affirm, that the discontinuance of these lectures would deprive a rising and intelligent class of people of sound elemeutary instruction in various branches, to which it is most desirable, in every point of view, they should have access, but to which their chance of access is small indeed, except through the door opened to them by your Committee."

The mere sending out of this circular seems to have raised an apprehension in the minds of many that an idea was entertained of stopping the lectures, which seems to have amounted, in their view, to a grievance, and evoked a strong amount of feeilng, of which abundant illustrations will be found in the reports already referred to in Appendix III.

On the whole, the Committee consider that the combination of the two methods, as now carried on, viz., short public courses delivered by eminent men of science, followed, after an interval, by an examination set by a competent examiner, and class or school instruction for a longer period, by teachers sufficiently qualified for this purpose, is perhaps the best arrangement which present circumstances will admit of, and the most advantageous mode of applying the limited funds at their command. They are confirmed in this opinion by finding that it is exactly the course recommended in a series of resolutions, adopted by the Council of the Royal Society of London, and concurred in by the Council of the British Association for the Advancement of Science, in the year 1857, on the question as to whether any steps could be adopted by Government or Parliament, calculated to promote the cause of science in this country. From these resolutions, to which their attention has been called by the Rev. Dr. Lloyd, late president of the British Association, and a Member of this Committee, they extract the following passage:—

"The president and council (of the Royal Society) recommend that the establishment of classes in metropolitan and provincial schools, where those who have not the means or opportunity of studying at the universities may be taught the elements of physical science, on a systematic plan, be promoted by grants from Government, in aid of such funds as may be locally contributed for that purpose. That the formation of provincial museums and libraries be encouraged in like manner, and that provincial lectures, accompanied by examinations, be established in Great Britain, in towns which request this assistance and engage to provide a part of the expense; such lectures to be in aid of the schools above mentioned. So that, by means of the two combined, a sound knowledge of the principles and applications of science may be systematically taught."

It is a gratification to the Committee to find that the course they are following agrees so closely with that recommended by these learned bodies, perhaps the highest authorities in the kingdom on such a subject.

The Committee have entered thus fully into this subject, as they apprehend that the department is not fully aware of the benefits resulting from these public courses of lectures, and would rather see them wholly replaced by school or class instruction; and they are impressed with the belief that any attempt to force on such a change too suddenly would not be judicious, being not unlikely to be attended with failure, and perhaps leading

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to a virtual exclusion of this portion of the kingdom from the benefits of the action of the department; while, at the same time, they cordially concur in the desirableness of gradually introducing a more systematic plan of instruction, according as the spread of education among the humbler classes, and perhaps the increase of manufacturing energy may prepare the way for it.

Maziere Brady, C.,
Dublin, 14 January 1861. Chairman.

APPENDIX.

Appendix I.

Courses of Public Lectures appointed by the Committee to be delivered in the Theatres of the Royal Dublin Society and Museum of Irish Industry during the Session of 1860–61.

1. Twelve Lectures on Zoology, by Professor Kinahan, in the Theatre of the Royal Dublin Society, commencing 2d October 1860, at 4 o'clock.

2. Twelve Lectures on Zoology, by Professor Kinahan, in the Theatre of the Museum of Irish Industry, commencing 18th October 1860, at 8 o'clock.

3. Twelve Lectures on Physics, by Professor Barker, in the Theatre of the Royal Dublin Society, commencing 22d October 1860, at 4 o'clock.

4. Twelve Lectures on Chemistry, by Professor Sullivan, in the Theatre of the Royal Dublin Society, commencing 12th November 1860, at 4 o'clock.

5. Twelve Lectures on Physical Geography, by Professor Jukes, in the Theatre of the Museum of Irish Industry, commencing 15th November 1860, at 8 o'clock.

6. Twelve Lectures on Geology, by Professor Jukes, in the Theatre of the Royal Dublin Society, commencing 3d December 1860, at 4 o'clock.

7. Twelve Lectures on Chemistry, by Professor Sullivan, in the Theatre of the Museum of Irish Industry, commencing 3d December 1860, at 8 o'clock.

8. Twenty Lectures on Physics, by Professor Barker, in the Theatre of the Royal Dublin Society, commencing 7th January 1861, at 8 o'clock.

9. Six Lectures on Economic Botany, by Professor Harvey, in the Theatre of the Museum of Irish Industry, commencing 6th May 1861, at 8 o'clock.

10. Ten Lectures on Botany, by Professor Harvey, in the Theatre of the Royal Dublin Society, commencing 14th May 1861, at 4 o'clock.

11. Ten Lectures on Botany, by Professor Harvey, to be delivered in the Botanic Garden, Glasnevin, at such time as may be arranged by the Council of the Royal Dublin Society.

Appendix II.—Provincial Lectures and Examinations.

No.	Place.	Lecturer.	Subject.	Time of Lectures.	Average Attendance.	Day of Examination.	No. of Candidates.	No. of Prizes Awarded.	Medals Awarded.
1	Carrickfergus	Robt. H. Scott, M.A.	Chemistry	May and June.	166	27 June	17	10	James Taylor. Francis Eardley.
2	Dromore	Prof. W. Thomson	Physical Geology	June	270	30 July	26	6	
3	Sligo	Prof. Sullivan	Chemistry	July	50	27 Aug.	8	2	
4	Strokestown	Prof. Davy	Chemistry	July	82	6 Sept.	10	5	John M'Greevy. Michael Mulhern.
5	Waterford	Dr. Lover	Electricity and Magnetism.	July and August.	386	14 Sept.	16	9	William Sharpe. J. J. Laffan. J. Budd. A. Peete.
6	Kinsale	Dr. Shaw	Astronomy	August	90	18 Sept.	18	3	John Murray.
7	Portlaw	Prof. Melville	Geology	August	48	20 and 21 Sept.	18	6	
8	Balieborough	Prof. Harkness	Geology	August	110	25 Sept.	23	8	Thomas Hall.
9	Lisburn	Prof. Wm. Barker	Heat, and the Steam Engine.	September	110	31 Oct.	36	9	St. John Herd. Eccles Rice Coates.
10	Londonderry	Prof. John Barker	Heat, and the Steam Engine.	October	123	12 Nov.	19	4	
11	Limerick	Mr. John Dowling	Chemistry	May, June, and July.	11	10 Aug.	9	2	Michael Malone.
12	Clonmel	Mr. John Dowling	Chemistry	August, September, October, November.	Day, 11 Evg., 39	6 Dec.	39	7, 1st grade. 7, 2d „ 6, 3d „	

APPENDIX III.

CIRCULAR referred to in foregoing Report.

Science and Art Department,
Committee of Lectures, Dublin Castle,
Sir, 12 September 1860.

THE length of time during which the system of provincial lectures and examinations, under the direction of this Committee, has been in operation, appears to be sufficient to allow a fair estimate to be formed of its value and utility in diffusing sound elementary instruction in practical science, especially among the artisan and working classes.

It is desirable that those local institutions, through whose co-operation and agency the system has been worked, should furnish statements or reports of their experience on this subject, for the information of this Committee and of the department, in order to enable them to judge how far it may be advisable to continue these lectures and examinations.

I have, therefore, to request that you will furnish me, at your earliest convenience, with a report, containing the views of the local committee or institution which you represent, adding any suggestions which may appear likely to be useful and practicable.

I have, &c.
F. J. Sidney, LL.D,
Secretary.

To ——

REPORTS in reply to the foregoing Circular.

From the Right Honourable Sir *John Young*, Bart., K.C.B., late Chief Secretary for Ireland, and President of the Bailieborough Literary Society.

Bailieborough,
Dear Dr. Sidney, 2 October 1860.

I SHOULD hear with much concern the account of any curtailment of the fund appropriated for the provincial lectures. That they have been of use, real use, in forming a taste for practical science, and in directing the minds of many young persons to the valuable subjects they treat of, I have not the smallest doubt. In this remote district, and the small town of Bailieborough, the application for a series of lectures was not prompted by me or any of the neighbouring gentry. It emanated from the people themselves. The interest displayed during the delivery of the lectures did not slacken in the least. The room in which Professor Harkness delivered them was always full. He informed me that those who attended seemed to be of the same class as attended in other parts of Ireland. This being so, as I know the class that was attracted to the lectures in Bailieborough, I may safely affirm that the discontinuance of these lectures would deprive a rising and intelligent class of people of sound elementary instruction in various branches, to which it is most desirable, in every point of view, they should have access, but to which their chance of access is small indeed, except through the door opened to them by your Committee. I trust the result of the enquiry now set on foot will be in accordance with my conviction of the value and utility of the provincial lectures, serviceable as they are likely to prove to a numerous class of society which is most anxious to avail itself of sound instruction in practical science, and whose scanty means, or occupation in life, preclude them from obtaining it, except it be brought to their own doors by competent persons, and on easy terms.

Believe me, &c.
John Young.

From the Honourable *L. H. King Harman*, D.L., President of the Ballymahon Literary Society.

My dear Sir, London, 2 October 1860.

YOURS of September 29th, addressed to Newcastle, was forwarded to me here. It is with the greatest pleasure that I send you the enclosed, which I hope may be useful. I know of nothing which would do more good to our country in every way, and turn the people's minds from what is bad to what is most useful and agreeable. I hope we may be able to have a lecturer next year: to me, personally, it is a matter of great interest and pleasure. Anything I can do to help on so good a system will always give me the greatest pleasure.

I am, &c.
L. H. King Harman.

Enclosure referred to.

Sir, London, 2 October 1860.

IN reply to your circular of September 12th, I beg to state that two lectures, in connection with the Science and Art Department, were delivered at Ballymahon in the years 1858 and 1859. They gave the greatest satisfaction, and were well attended by all classes and creeds; some having walked long distances to be present. The greatest disappointment was felt this year when it was found that we could not have our lectures, which the people began to hope would be annual. I know of nothing more calculated to do good to the country, in a moral and social way, than the continuance of these lectures, which, in our neighbourhood, have done much to induce the young people of the country to read and study, and were most popular among the artisan class, many of whom used to attend, even when fatigued by a hard day's work. In these opinions I am borne out by the members of the local committee. At our last lecture there was a larger attendance of schoolmasters and scholars, from national and other schools, many of whom were examined, and obtained premiums. Among these were two little girls, who had attended the whole course, and with whom the examiner was particularly interested. In conclusion, I trust that the state of your funds may permit of your sending us a lecturer every year.

I am, &c.
L. H. King Harman.

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From the Royal Cork Institution.

Royal Cork Institution,
My dear Sir, 2 October 1860.

In reply to your inquiry respecting the courses of lectures which have been delivered here under the Department of Science and Art, I am requested by the managers to convey to you their high estimate of the value and importance of such courses, and their assurance that a continuation of them would still more fully prove their worth.

They have begun to promote in society, but especially amongst intelligent young persons, a thirst for knowledge, and a desire for the attainment of respectable proficiency in different branches of scientific research. A laudable emulation was excited by the fact, that the lectures were delivered under the patronage of the department, and that prizes and medals awaited successful competitors. In fact, the managers regard the work as only just commenced, and anticipate that a lengthened continuance of courses of provincial lectures would prove eminently successful, and be most beneficial by the impulse they would give, as well as the knowledge they would directly impart.

The managers hope that nothing will occur to deprive this city and neighbourhood of the anticipated good which the past two or three years have led them to hope would be perpetual.

I remain, &c.
Nicholas Peterson,
Hon. Sec. and Treasurer.

F. J. Sidney, Esq., LL. D.,
Committee of Lectures, Dublin Castle.

From the Waterford Mechanics' Institute.

To the Committee of Provincial Lectures, Dublin Castle.

The Report of the Managing Committee of the Waterford Mechanics' Scientific Institute on the advantage of Provincial Lectures and Examinations thereon.

Your Committee have to report favourably on the working of the present system of provincial lectures in Ireland.

The practical utility of examinations on each course of lectures is fully borne out by the fact, that a great desire is manifested by the working classes particularly to attend these lectures, and present themselves for examination. Some years ago a free admission was offered to mechanics and operatives to attend scientific lectures, but they could not be induced to come. Since the examination system has been adopted, they come voluntarily and enrol themselves as members of the institute; and the attendance of the operative and apprentice class at lectures for the past two years has been numerous and respectable.

It is a matter of the utmost importance, nay, vital necessity, to continue these lectures. They have had scarcely time to operate to the full extent on the people; and should the grant be withdrawn or reduced, popular instruction in connection with the mechanics' institutes of this country will receive a blow which will shake them to their centre.

Your Committee are of opinion that the grant should be increased to double its present amount, so as to permit of having two courses of lectures in one year in each of the towns, as at present it barely admits of only one.

Should a movement be intended to withdraw this grant, your Committee being fully alive to the effect it would have in damaging the cause of education in this country, are determined to make an appeal to the House of Commons by special motion; and they will take steps to enlist the co-operation and support of every Irish Member of Parliament who feels an interest in promoting the educational welfare of the people of Ireland.

Approved of, 26 September 1860, at Waterford.

Signed, by order of the Managing Committee of the Waterford Mechanics' Scientific Institute,

John G. Davis, Secretary.

From the Limerick Athenæum.

Athenæum, Limerick, 18 October 1860.

To the Committee of Lectures, Dublin Castle.

The Report of the Committee of the Limerick Athenæum on the advantages arising from the present system of Provincial Lectures and Examinations.

Your Committee are much gratified in being able to commence their report by expressing their satisfaction at the results obtained in this district from the series of provincial lectures and examinations which have been held under the direction of the Committee of Lectures.

No more striking example could be afforded of the practical good which has resulted from the present system than the fact, that the entire of the unusually large number of successful answerers (19) at the examination held on the 17th November 1859, were persons exclusively belonging to the artisan class, thus showing that the industrial portion of the community will gladly avail themselves of sound scientific instruction when it is placed within their reach.

Your Committee deem it to be of the greatest importance that the present system should not only be continued, but, if possible, enlarged, so as to permit of a more regular course of lectures in those places which may give satisfactory evidence of a practical result such, for example, as has been already given by Limerick. A desire for education is, without doubt, the most striking feature of the present time in this country; and it should be the care of those whose especial duty it is to foster and encourage this feeling by every means in their power.

Your Committee cannot close this report without alluding in terms of the highest possible praise to those gentlemen who have so ably lectured on various subjects at this institution. It is sufficient to mention the names of such men as Professors Edmund, Davy, and Sullivan, to show that the "Committee of Lectures" have availed themselves of the very best talent that could be procured.

Signed on behalf of the committee of the Limerick Athenæum,

W. Fitzgerald, Mayor, President,
William Lysaght, Secretary.

From the Portlaw Literary Society.

Woodview, Portlaw,
Sir, 9 November 1860.

In reply to your circular, I beg to say that we have now had six courses of lectures delivered in this locality with the aid of the government funds. Three under the Royal Dublin Society, and three under the Committee of Lectures of the Department of Science and Art.

1. Dr. Lover, Miscellaneous Natural History.
2. Dr. Lover, Electricity and Mechanics.
3. Dr. Barker, Mechanics and Natural Philosophy.
4. Dr. Melville, Zoology.
5. Dr. Kinahan, Botany.
6. Dr. Melville, Geology.

Having consulted many of those who attended these courses of lectures, I find that all are unanimous in their opinion of the good service which they have done in the locality. To the course delivered by Dr. Kinahan is due the establishment of our literary society, which, considering the class of those who constitute it, has had great success. It has now been in operation for nearly two years. It numbers over 100 members, possesses a reading room, and a library of over 600 volumes. It holds meetings weekly during 10 months of the year, a paper being read on some historical, geographical, or literary subject, on one night, and a debate being held on the alternate nights. The following are a few of the subjects on which papers have been read:—

3 On Chemistry.
3 On Physiology, Digestion, Respiration, and Circulation.
1 On Theory of Wind Currents.
1 On History of Chinese Manners and Customs.
1 On History of Japan.
2 On Arctic Voyages,
1 On Punctuality and its advantages.
1 On Who are the Truly Great? The Workers.
1 On Penny Banks.
2 On Astronomy.
1 On Physical Geography,

And many other allied subjects, with occasional readings from Macaulay's Poems, Shakspeare, Goldsmith, &c. This series will evince the amount of mental activity excited amongst us, the more so when I tell you that some of the most interesting papers were the productions of working men, who never made an attempt of the kind before. Although the subject of the last course of lectures delivered by Dr. Melville was entirely new, and one about which, at first, but little interest was felt, yet the attendance was fair; and before half the course was over, all felt that they had got hold of a subject calculated to give them much pleasure, and lead them into new phases of thought. Many of the working people who attended them say that their rambles are now more interesting than they ever were before, as they have always before them new subjects for inquiry and reflection.

Man does not live by bread alone; and in a working population, such as we have here, the leaven of scientific knowledge is most desirable for its humanizing influence, independent of any other consideration. I trust that we may for a long period yet be favoured by visits from the lecturers of the committee, and only hope that the Government may increase the means of extending their usefulness. There is one thing I assure you of, that should the Government be induced to think of diminishing the present very small grant, we will be able, through our representatives, to show how unwise a move it would be, and to prove in Parliament that there is not any portion of the finances of the kingdom better spent and more thankfully received.

I am, &c.
James Martin, President,
Portlaw Literary Society.

F. Sidney, Esq.

From the Carrickfergus Literary Society.

Carrickfergus,
Sir, 2 October 1860.

In reply to your circular of the 12th ultimo, requesting a report of the views of the committee of the Literary and Scientific Society of the Union Hall, through whose agency alone the system of provincial lectures and examinations was worked in Carrickfergus, on its value and utility in diffusing sound elementary instruction, especially among the working classes, I beg to state that our committee find it exceedingly difficult to supply such a report; not because they have any doubt of the value of the lectures, and their beneficial results, but because our society has been giving lectures for more than seven years on subjects of practical utility similar to those of the Science and Art Department.

We could mention instances of persons who before the institution of our society earned their bread by the sweat of their brow, who had, mainly through the agency of public lectures, their minds expanded, and their tastes improved, and now live by the more respectable, though probably not less toilsome, labour of their brain.

We freely concede to the delegates of the Science and Art Department all the praise that can reasonaly be claimed for them in accomplishing this desirable end, and also in enabling us to elevate the tastes and improve the habits of the artizan and working classes; but we cannot say that they were not ably assisted.

As we are permitted to make a suggestion likely to be useful and practicable, we recommend a continuance of the provincial lectures and examinations, and an extension of the grant for the purpose; and we strongly recommend a discontinuance of the pre-payment of 10 *l.* by all societies whose officers are unpaid, whose objects are unselfish, whose practice repudiates all elements of political and religious discord, and whose end is the glory of God in the highest, on earth peace and good will towards man.

I have, &c.,
William Molony, LL.D.,
Hon. Sec. Literary and Scientific Society.

To F. J. Sidney, Esq., LL.D.,
&c. &c. &c.

From the Dromore Local Committee.

Sir, Dromore, 22 September 1860.

In reply to your circular, we have to state that as our experience as to the practical results of the provincial lectures and examinations, under the sanction of the Committee of Lectures, is so limited

App. No. 11. limited we cannot venture to do more than repeat that in our locality the course of lectures on Physical Geology by Professor Wyville Thomson have been of the greatest advantage to us in various ways. They have stimulated those already inclined to improve themselves to renewed exertion, and created a taste for reading on scientific subjects among the young generally, which we trust will continue and be of permanent advantage. Many parents have spoken with thankfulness of the change that has taken place in the habits of their children, who now spend their leisure time in reading and endeavouring to improve themselves; and steps are being taken by some to form a class for reading together during the winter months; so that, on the whole, we have every reason to consider our lectures here a decided success. We look forward with pleasure to the ensuing summer, when we hope again to have the advantage of a similar course of lectures, which we trust will be of as great advantage to us as the course we have already had.

I have, &c.,
J. A. Kerr,
Local Secretary to the Dromore Committee.

F. J. Sidney, Esq.

From the Strokestown Literary Society.

Strokestown,
Sir, 15 September, 1860.

In reply to your circular, dated 12th September, requesting the views of the local committee in connection with the Science and Art Department, as to the value and utility of the system of provincial lectures and examinations in diffusing sound elementary instruction in practical science, I have been directed to inform you that, owing to their very short experience, two courses of lectures only having been delivered here, one in 1858 and the other this season, the local committee are not in a position to state any facts in support of their opinion that those lectures and examinations are calculated to be eminently useful in extending a knowledge of practical science. It cannot be questioned that a great many of those who attended the lectures were afforded an opportunity of acquiring a class of information otherwise quite beyond their reach, and the local committee are glad to believe that considerable benefits have been derived therefrom.

I have, &c.,
M. Flynn, Secretary.

F. J. Sidney, Esq., LL.D.,
Science and Art Department, Dublin Castle.

From the Kinsale Local Committee.

Kinsale,
Sir, 21 September 1860

In reply to your circular of the 12th instant, requesting from me a report containing the views of our local committee as to the value and utility of the system of provincial scientific lectures and examinations now in operation, I am directed to express their favourable opinion of the advantages they confer and the benefits likely to result therefrom. They deem them, however, especially desirable in towns like this, whose size, circumstances, and position preclude the establishment of local scientific institutions, such as large ones usually possess, and under the aid and instrumentality of which talent is frequently developed that might otherwise have remained dormant or uncultivated.

In these views they are confirmed by the result of the lectures and examinations on astronomy, recently held here; a spirit of inquiry appearing to be evoked amongst many of the middle classes, exceeding their expectations, and which they cannot but hope, if duly followed up by similar periodical lectures, will become more widely extended and prove proportionably beneficial.

I have, &c.,
William Newman, Clerk,
Secretary to Local Committee.

F. J. Sidney, Esq., LL.D.,
Secretary to Committee of Lectures,
Dublin Castle.

From the Aughnacloy Local Committee.

Aughnacloy,
Sir, 25 September, 1860.

I have received your letter of the 12th September, and I have much pleasure in expressing my opinion of the subscribers to scientific lectures in this town, that they have been productive of most beneficial results, which have been felt even by those who did not attend the lectures. We have had two courses of lectures, and one examination; and whilst the amount of actual information acquired has of necessity been small, owing to the short space of time occupied by each course, a spirit of inquiry into the laws of nature has been excited, and persons have been induced to direct their attention to such subjects who would not otherwise have done so. These results, however, have not been produced amongst the working classes, but amongst persons who would otherwise have been equally debarred from such advantages.

I remain, &c,
Thomas G. Stokes.

From the Carlow Mechanics' Institute.

Carlow,
Sir, 22 September 1860.

I am in receipt of your letter of the 12th instant, requesting information as to the working of the provincial lectures and examinations under the direction of your committee.

Although we cannot say that these lectures have not been useful, yet I regret that they have not succeeded in this locality to our entire satisfaction. The attendance has not been numerous, and in a financial view they have proved embarrassing, never having realised the expenses.

It is considered that a teacher located here for the winter months, and holding an evening class three time a week, would be more likely to create and foster a taste for scientific subjects than a course of public lectures. I fear it is hopeless to expect much practical good from any attempt to teach science by a course of lectures in provincial towns, where there are no opportunities of a previous attendance on classes.

In

In any measure taken to carry out their object, your committee should bear in mind the limited means at the disposal of local committees; even the small sum of 10 *l.* paid for each course of lectures was, in some cases, found embarrassing when taken in connection with the other expenses. This should be considered where your object is "the diffusion of sound and elementary instruction in practical science, especially among the artisan and working classes." To effect this, the charge to them (if any) should be extremely moderate.

I am, &c.
Thomas Richardson,
Honorary Secretary Mechanics' Institute.

F. J. Sidney, Esq., LL.D.

From the Bandon Local Committee.

Sir, Bandon, 22 October 1860.

In reply to your circular of 12th last month, delay in acknowledging which we pray you will excuse, we have to say that we can speak emphatically as to the value of the provincial lectures in this locality. A growing taste for intellectual culture has been manifesting itself, and we have no doubt, in no unimportant degree, may be traceable to the provincial lectures. The interest exhibited in the classes which form an important feature of the institution, we think is calculated alone to establish the fact, that the liberality of the Government is not without result. A scientific and literary society has been established in this town, and the continuance of the lectures would materially aid its progress.

We are, &c.
Stephen Browne, LL.D.
William Shaw, J.P.
R. N. Allman.

F. J. Sidney, Esq., LL.D.,
Dublin Castle.

From the Enniskillen Local Committee.

Enniskillen,
Dear Sir, 19 October 1860.

With respect to the value of the public lectures and examinations, under the direction of the Committee of Lectures, I beg to state, on behalf of the Enniskillen Committee, that the lectures and examinations were most useful, not only in diffusing sound elementary instruction, but also in creating a taste and desire for it, where it had not existed; and could the local committee calculate, with certainty, upon an annual course of lectures, at the season of the year best fitted for them (*i.e.*, the winter), there is little doubt that a great and permanent good would soon be effected.

Faithfully yours,
John M'Laurin, Secretary.

F. J. Sidney, Esq., LL.D.

From the Clonmel Mechanics' Institute. App. No. 11.

Clonmel Mechanics' Institute.

Sir, 6 October 1860.

In reply to your circular of the 12th ultimo, requesting to be furnished with a report containing the views of local institutions as to the utility of the system of provincial lectures and examinations, in diffusing sound elementary instruction in practical science, I am directed by the committee of this institution to report most favourably. The system of provincial lectures, as formerly carried out under the auspices of the Royal Dublin Society, was in itself of much value in improving the minds, enlarging the ideas, and giving a higher and more practical tendency to the thoughts and reading of all classes of the community.

The lectures of such men as Sir Robert Kane, the late Professor Nicoll, Professor Allman of Edinburgh, Davy, Sullivan, Lover, Rev. Dr. Cahill, and others, which were attended by large audiences, could not fail to make a very useful impression on the minds of our citizens, and to this, in a great measure, the committee attribute the growth, extension, and success of the Clonmel Mechanics' Institute.

But since the system of public examinations has been added to that of lecturing, especially as carried out by the committee of lectures in Dublin, under the Science and Art Department, this tends most materially to give permanency to that expression, and to diffuse a much higher education, especially amongst the rising generation.

And that it has been eminently successful, for so far, even beyond the committee's most sanguine expectations, is evinced by the gradually increasing numbers of those who present themselves for such public examinations.

I have, &c.
J. Hackett, J.P., Alderman,
Chairman.

F. J. Sidney, Esq., Dublin.

From the Drogheda Mechanics' Institute.

Drogheda Mechanics' Institute,
Sir, 5 October 1860.

A reply to your printed circular of the 12th ultimo demanded, and has received the serious consideration of the committee of our society. We have been for many years labouring to advance the social and moral condition of the labouring and middle classes of the community amongst which we reside, by placing within their reach books of a high literary character at a nominal cost, by lectures from persons we judged best qualified to communicate information on useful literary and scientific subjects, who reside in our own locality or at a distance, whenever their services could be obtained, and by paid lecturers as far as our funds would allow; by applications to the Lectures Committee, Dublin Castle, and to the Dublin Statistical Society. The last two named sources of assistance have been our most permanent auxiliaries, and those to which we look with most confidence for help; the Lectures' Committee, more especially, as the Government grant being at their disposal, and their ability to choose lecturers to treat on various subjects make them more popular with the members of our institution, than the other, which is confined to political economy alone.

Since situations under Government have been opened to merit by competitive examinations, we consider the examination succeeding each course

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of lectures a very judicious arrangement, the continuance of which we highly approve of, and we think with good reason, as our first prizeman, Mr. Wm. D. Bruce, after Dr. Lover's last course of lectures, has since obtained an Indian appointment of 180*l.* per annum at present, and a scale of progressive increase annually for the future. Others of our successful candidates have also since obtained premiums at other examinations, and have excited a degree of emulation among the other members of the society. For these latter reasons the directors regret that their application for a course of lectures, in the last and present years, have been so far unsuccessful, as they have reason to think the number of competitors would at present be greatly increased if an examination took place this session. When Dr. Lover, Dr. Barker, and Professor Harkness lectured here, sent down by the Lectures Committee, the audiences were large and very attentive; other lecturers attended whose knowledge of their subjects may have been as extensive as those gentlemen named, but their mode of communicating information to a mixed audience not being so popular, nor their names so well known, their lectures were not attended with equal success. The committee believe that if the members, through their representatives, had a voice in naming the lecturer, this single circumstance of his being the lecturer of their choice, would add materially to his utility; and if the deposit of 10*l.* heretofore demanded could be dispensed with, it would be another desirable feature in future appointments, as this sum frequently presses heavy on an institution oftentimes limited in means, and struggling against perhaps many other difficulties.

These suggestions the committee feel called respectfully to submit to your honourable Board; and they beg also to state, that they shall always feel it an honour, and consider it their duty and a pleasure, in endeavouring to the utmost of their power, to assist in carrying out the wishes of the Lectures Committee, for the diffusion of literary and scientific education on a useful and extensive scale, to the utmost of their ability.

Signed on behalf of the committee of the Drogheda Mechanics' Institute,

John Shaw, Secretary.

F. J. Sidney, Esq., LL.D.,
Chief Secretary's Office, Dublin Castle.

From the Bailieborough Literary Society.

Bailieborough,

Dear Sir, 8 October 1860.

In reply to your circular, dated 12th September last, I am directed by the Council of the Bailieborough Literary Society to state, that they believe the lectures are of the greatest possible utility, being brought within the reach of access of persons who are not in a position to avail themselves of attending lectures unless made easy of access. The council, who are not composed of the gentry of the county, were the first to request a course of lectures here, and are happy to say they were fairly attended, and that the interest seemed to increase as they were drawing to a termination; and hope the result of the examination will tend to show that a desire for improvement is manifest in the locality, which would be a misfortune to check for the purpose of making a trifling saving.

I may mention that the Council expect to be favoured with another course of lectures next year.

I am, &c.
Thomas Chambers, Secretary.

F. J. Sidney, Esq.

From the Chemical Agricultural Society of Ulster.

Laboratory, Chemico-Agricultural Society of Ulster, 63 Upper Arthur-street,

Sir, Belfast, 2 November 1860.

In reply to your circular, I beg to state, for the information of the Committee of Lectures, that the courses of lectures delivered by Professor Hodges, in Belfast and the neighbouring towns, excited much interest, and were calculated to communicate much useful information. In Belfast, the lectures were attended by a large number of young men engaged in business, and by the pupils in the model schools; and from the superior character of the answering at the examination, and the number of prizes awarded, there is reason to conclude that a most beneficial effect was produced, and a considerable amount of valuable knowledge obtained by those present.

The Chemico-Agricultural Society have, since 1845, laboured to diffuse agricultural knowledge by lectures, and are fully persuaded of the utility of the system.

The numbers who present themselves at the examinations instituted by the committee, afford a most imperfect idea of the amount of good which results from efforts of the lecturers.

I remain, &c.,
William B. Ritchie,
Honorary Secretary.

Dr. Sidney, LL.D., Secretary,
Committee of Lectures.

From the Lisburn Literary Society.

Sir,

In reply to your circular relative to the estimate we have formed of the value and utility of your lectures in diffusing sound elementary instruction in practical science, we beg to state that the course of lectures delivered here by Dr. Barker, on Heat and the Steam Engine, were generally well attended by those of the artisan classes who are, from their occupation interested in the subject; but we regret to state that not one of that class came forward at the examination.

We fully value the privilege of having such lectures, and trust that before long we may again be favoured with a course on some other subject, when, we doubt not, our artisans will better appreciate them.

Reports of attendance forwarded to you last week will show the interest which they excited; and from a cursory observation we made during the lectures, not less than 75 per cent. of the audience consisted of that class specified in your circular.

Signed on behalf of the Council of the Lisburn Literary Society,

John S. Ward, Hon. Secretary.

To F. J. Sidney, LL.D.

Appendix, No. 12.

PAPER handed in by *D. J. Corrigan*, M.D., 28 April 1864.

ROYAL ZOOLOGICAL SOCIETY OF IRELAND.—March 1864.

WHEN the Royal Zoological Society of Ireland was founded, in the year 1832, Decimus Burton drew up a Report, on instructions from Government, as to a site for the gardens in the Phœnix Park. He recommended the present site, including the pond and the opposite bank. The following is an extract from his Report:—

"It will also be obvious, that to render the water of practical benefit to the society, it should be enclosed within the boundary. The best mode of obtaining this object would be for the Society to obtain, if possible, a grant of the opposite bank, extending to the road which leads to the Vice-Regal Lodge. This also would be desirable on other points. The land on each bank might then be laid out with plantations, walks, and buildings, designed in such manner as materially to add to the beauty of the view from either side of the lake; and certainly the general effect of the valley, as seen from the park, would be greatly improved. Impressed with the idea, that one day or other an arrangement will be made by which these extensions of the site will take place, I have been induced to prepare the accompanying design, in which they are comprised."

Year after year, each succeeding Council was more and more impressed with the truth of Decimus Burton's observation, that "the water should be enclosed within the boundary" of the gardens. The waterfowl, the greatest ornaments of the gardens, strayed, and were stolen or killed; and the deer crossing, by swimming at night, trampled down the flower beds, and barked or cropped the shrubs, often destroying, in a single night, valuable plants the growth of years. The opposite bank became each year more frequented by persons who amused themselves by hunting the islands and covers with terriers, and otherwise disturbing the birds; and to such an extent has the annoyance increased, that in the past year not a single water bird has been permitted to hatch its eggs and rear its young.

Almost every year each succeeding Council pressed upon official authorities the necessity for completion of the original design of the gardens, but various delays and difficulties arose, among which may be enumerated the famine and succeeding years, when more sad and serious topics occupied men's minds—the change of Governments—the change of law in respect of the management of the Phœnix Park—and the official delays that are necessarily connected with the consideration of such subjects.

Those delays and difficulties have, however, now terminated, and the Lords of the Treasury, through the Board of Works, have communicated to the Council of the Society, that they have granted to the Society the opposite bank of the lake, according to a certain boundary, on condition of the fence being of a light open construction.

This meets the view of the Council, as well as of the Treasury.

The Council are desirous of putting up such a light wire fence as will be sufficient to protect the waterfowl and not impede the view, and by appropriating the enclosed bank to the smaller kangaroo tribe, and to the smaller kinds of antelopes, deer, Indian cows, and llamas, they hope, as Burton's Report anticipated, "that the general effect of the valley, as seen from the Park, will be greatly improved;" in like manner as a similar arrangement has added so much to the attractions of the Bois de Boulogne in Paris.

The Council of the Zoological Society, moreover, seek in this proposed addition a higher result than merely increased attraction in scenery or animals. The importance of adding to our animal kingdom, as to our vegetable, such stocks as may be useful to man for food, as well as for other purposes in our social economy, is now fully recognised, and the Council hope, that with the water protected and the additional ground enclosed, the Zoological Society will also become an acclimatation society, to introduce and extend through the country new varieties of animals, but particularly of waterfowl, which furnish so vast a proportion of food and luxuries to man, without encroaching on the domains of the other divisions of the animal kingdom, or on the food of man.

Laying these views before you, the Council ask for your subscription towards the erection of the boundary fence. They have no fund whatever available for the purpose. All the funds at their command are scarcely sufficient for the present maintenance of the gardens.

There is one other consideration on which the Council would ask for your support.

From the foundation of the Zoological Society to the present time, a period of 32 years, its successive Councils have kept in view, as their foremost object, the intellectual recreation and instruction of the working classes. They were the first in the United Kingdom to open their gardens on Sundays after the hour of Divine Service, to win those classes from the bad air of cities and destructive neighbourhood of whisky and gin shops, to pure air and purer enjoyments. And in addition, on every week day in summer, the gardens are open from five o'clock to dusk, at a rate accessible to all, 1*d.*; while, still further, the children from all public charitable institutions are admitted gratis, in charge of their teachers.

A sum of at least 400*l.* will be required for the proposed improvement.

Your contribution is solicited, and as soon as convenient. The Council will not commence the undertaking until they feel assured they can command success.

The members of the Council, the honorary secretaries, Mr. Montgomery, secretary, will receive subscriptions; and the superintendent, Mr. Batho, at the gardens, is also authorised to receive subscriptions and give receipts.

Hans Irvine, M.B.
B. M'Dowel, M.D. } Hon. Secretaries.

Appendix, No. 13.

PAPER handed in by *D. J. Corrigan*, M.D., 2 May 1864.

Royal Zoological Society of Ireland.

REPORT of the Treasury Commission appointed to Inquire into The Royal Dublin Society, Museum of Irish Industry, Royal Hibernian Academy, Royal Irish Academy, and the System of Scientific Instruction in Ireland. (18th October 1862.)

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At a meeting of the Council of the Royal Zoological Society, held the 18th day of July 1863, the Council considered the above report, in which the following paragraph, having reference to the Royal Zoological Society, occurs :—

"The annual grant to the Zoological Society is voted in the Estimate of the Royal Dublin Society, but, besides acting as the channel for payment, that society does not exercise any interference with regard to it. Some advantage would be gained if all the Parliamentary Grants-in-Aid of Science and Art in Dublin were in like manner included in the Estimate of the Royal Dublin Society, and were paid through its medium, inasmuch as they would then be annually brought under consideration, in one point of view, and the Council of the Royal Dublin Society would have an opportunity of making any representation which the circumstances of the time might render proper in reference to them. Beyond this, we cannot advise that the Royal Dublin Society should be vested with any control over the proceedings of other societies."—*Vide* pp. 33, 34.

The report further goes on to observe upon the benefits that would be likely to arise from an "affiliation" of other societies to the Royal Dublin Society.

The paragraph above quoted, proposes to give a power (not hitherto possessed by it) to the Council of the Royal Dublin Society, of commenting upon, or making representations upon, the management or proceedings of the Royal Zoological Society, and, therefore, exercising a certain control over it.

Resolved,—That in the view here put forward by the Commissioner, the Council of the Royal Zoological Society cannot concur, and for the following reasons :—

1. The Royal Zooloogical Society was founded in the year 1831, altogether by private voluntary donations and subscriptions, without any aid from, or any connexion with, any other society.

2. It has been always managed, and is still managed, by a Council elected annually by the members at large, to whom the Council make an annual report, and the Council cannot admit the competency or right of the Council of the Royal Dublin Society, to "make any representation" upon its affairs.

3. In the year 1854, 22d year after its formation, the Government, impressed with the good management and usefulness of the society, conferred on it an annual grant of 500 *l.* which, for the convenience of official management, has been, and is paid through the agency of the Royal Dublin Society. This management, for financial convenience, appears, however, to the Council, to be no more a reason for giving any control over its proceedings to the Council of the Royal Dublin Society, than it would be for giving a supervision over the Zoological Society to the Directors of the Bank of Ireland, if the Bank were made the medium of paying its annual grant. Moreover, in the Minute of the Board of Trade, announcing the Grant-in-Aid, the perfect independence of the Royal Zoological Society was provided for in compliance with the representation of the Council of the Zoological Society. The Minute of the Board of Trade of 11th April 1854, observes, "My Lords will recommend that an aid be given to the gardens of the Zoological Society, through the agency of the Royal Dublin Society, if that body will accept the trust, the sum in aid is not to be considered *as in any way* dispensing with the separate existence of the Zoological Society, but it would imply that this Society should send its account for audit, and report its proceedings to Parliament through the Dublin Society."

The Report of the Commissioners now under consideration goes much further, for it proposes that the Council of the Royal Dublin Society should be empowered to make any representation which they, from time to time, might think proper as to the affairs or management of the Royal Zoological Society, and it is this new power now proposed to be given to the Council of the Royal Dublin Society to which the Council of the Royal Zoological Society object.

4. The Council of the Royal Zoological Society are of opinion that any "affiliation" of the Royal Zoological Society to the Royal Dublin Society as "a point of union" with the new power proposed to be given to its Council, instead of leading to harmonious co-operation, as would seem to be anticipated, would be more likely to engender dissensions

dissensions and lead to collision between two bodies that have hitherto worked so well in their independent existence.

The views of the two Councils might at any time clash, and the two Councils were, in fact, for a considerable period in opposition to one another on a most important principle, the admission of the public to their respective gardens on Sundays. The Zoological Society has admitted the public since the year 1840, a period of more than 20 years, while the Royal Dublin Society has only admitted them within the last two years. It is obvious that if the proceedings of the Zoological Society had been at any time during that period liable to be controlled in any way by reports from the Council of the Dublin Society, its action in settling the precedent of the admission of the public on Sundays, a measure that is now acknowledged to have been attended with much benefit, might have been seriously interfered with.

5. Neither the Council nor any person on the part of the Zoological Society conveyed to the Commissioners any desire to have the present relation of the two societies remodelled, nor did the Commissioners examine any member of the Zoological Society on the subject.

6. The Commissioners in their report (p. 33) acknowledge that "The Royal Zoological Society is a well managed Society, that contributes in a high degree to the instruction and amusement of the people," thus furnishing in its report a good reason for leaving its management untouched. It is, moreover, scarcely to be expected that gentlemen who have given their time and attention to the Zoological Society would continue to do so if their independence and freedom of action are to be interfered with, or their proceedings made subject to the control or comments of any other society.

In conclusion, the Council have to observe that their only desire is, that their present relations with the Royal Dublin Society should remain as they have existed for the last nine years, leaving to mutual and voluntary arrangements such co-operation as may at any time appear desirable, but not otherwise giving to either Council or Society opportunity or power to control or comment upon the proceedings of the other; and the Council of the Zoological Society feel convinced that such independence of action will maintain a laudable rivalry, in respectively working for the advantage of the public in both institutions, that would languish or cease to exist under the proposed system of "affiliation" or subordination of one society to the other.

D. J. Corrigan,
President.

Resolved,—That the President be requested to forward a copy of the above Minute and Resolution of Council of Royal Zoological Society to his Excellency the Lord Lieutenant, soliciting his Excellency's consideration and support.

Resolved,—That copies of the foregoing Minute and Resolution be forwarded to the Lords of the Treasury, to the Committee of Council for the Department of Science and Art, and to the Council of the Royal Dublin Society.

D. J. Corrigan,
President.

Appendix, No. 14.

PAPER put in by Dr. *Graves*.

App. No. 14.

AN ABSTRACT of the INCOME and EXPENDITURE of the ROYAL IRISH ACADEMY, for Ten Years ending 31 March 1863, compiled from the Audited Accounts to that date; with an APPENDIX continuing the same to 31 March 1864, with EXPLANATORY NOTES and REMARKS supplied by *Edward Clibborn*, Clerk and Accountant, Royal Irish Academy.

EXPLANATIONS of the SUMMARY of the ROYAL IRISH ACADEMY ACCOUNTS for the Eleven Years ending 31 March 1864.

1 May 1864.

Col. 18. Col. 35. Col. 1. BALANCES, &c.—Gives the cash in hand on 1st April in each year; but as there are debts due or accruing from work in printer's hands, &c., these balances are not real. The cash balance on 31st March 1864, not in the table, was 80*l.* 8*s.* 6*d.*, but, like all previous balances, it was not real, for it contained the difference between Col. 18, 50*l.*, and Col. 25, Tidal Observations, 20*l.*, and a small credit balance belonging to the Catalogue Fund. There was a printer's and a wood-cutter's bill also in progress for work in hand; so, in fact, there was on 31st March no real balance available towards the expenses of the year 1864–5.

Col. 2. Parliamentary Grants.—The Parliamentary Grants were 300*l.* for the two upper years, and 500*l.* for the lower ones. The grant at present is 500*l.* Before the Royal Irish Academy moved into its new house, there was a Treasury allowance, included in the three upper items in this column for rent and maintenance of the old house, given to the Academy by George III., which sums, amounting to 357*l.* 3*s.* 10*d.*, were paid over to the Board of Works towards the payment of rent, &c., of the new house. This sum in Col. 26 should be deducted from the sum of Col. 2 to exhibit the net amount of Parliamentary Grants to the Academy for the 10 years ending 31st March 1863.

Col. 26.

Col. 3. Extra Grants, &c.—The first charge for Clare Find of Gold Antiquities, 150*l.*, is to be taken with 142*l.* 11*s.*, in Col. 10, the difference between that amount and 150*l.* having been paid by the Academy, and charged in antiquities bought, Col. 20, of the same year. The second charge for catalogue in same, Col. 3, 200*l.*, is to be taken with 175*l.* 9*s.* 6*d.*, subscription to catalogue, Col. 17. In this case also the difference in amount having been made up by the Academy which greatly exceeded it, as appears by Col. 31, amount 905*l.* 11*s.* 1*d.*, which is hereafter more particularly explained. These apparent differences between the Parliamentary Grants and Academy private subscriptions, in both cases were made good by the Academy in its corporate form, consistent with the understanding usual in cases of the kind with Government.

Col. 10. Col. 20. Col. 17.

Col. 4. Cunningham Interest.—This is a trust fund growing out of a bequest to the Academy, and is available for premiums, &c.; but, down to 1856–7 (*see* Col. 29), it was applied to the ordinary expenditure of the Academy, except on occasions when medals and premiums were paid. In 1857–8 (*see* Col. 29), the present treasurer made an investment in Three per Cents. towards restoring the monies taken from this fund in cash, 463*l.* 9*s.* 5*d.*, Col. 29, and since then has invested the interest, and sold out stock (*see* Col. 34) to pay for premiums, thus keeping the trust-money perfectly distinct from that of the Academy. The premiums granted in the 10 years (*see* Col. 34) amounted to 176*l.* 13*s.* 4*d.*

Col. 29.

Col. 5. Academy Interest.—Total in 10 years 233*l.* 14*s.* 11*d.*, or 23*l.* 7*s.* on the average. This is very much under what it would have been if the life compositions received annually before 1857–8 (*see* Col. 28) had been regularly invested in Consols, as they should have been, instead of being applied to the ordinary expenditure of the Academy, which was greater than its actual income. The interest receivable on the life compositions of members on the Academy roll on the 31st March last, at 3 per cent., was 100*l.* 6*s.* 6*d.*; but the interest of Consols, which should have represented the life compositions capitalised, was only 33*l.* 15*s.* 4*d.* (*see* Col. 5, *red* figures). To meet the deficiency in the life composition, which is a trust fund, so far as circumstances would allow, our present treasurer (*see* Col. 28) has from time to time invested in Consols the sum of 1,508*l.* 13*s.*; but he sold out (*see* Col. 13) the sum in cash of 980*l.* 7*s.* 4*d.*, leaving a balance in cash to the credit of the life compositions fund of 528*l.* 5*s.* 8*d.*, which should be compared with 1,008*l.* (*see* Col. 7), the total received in 11 years ending 31st March 1864, thus showing that the proper capital which should be productive of income, has been, to the extent of over 2,000*l.*, expended on the working of the Academy. At present, and for some years (*see* Col. 28), this destructive course has been prevented by the investment of life compositions.

Col. 28. Col. 28. Col. 13.

Col. 6. Proceeds

Col. 6. Proceeds of Publications Sold.—The transactions sold produced nearly the entire of this amount, the sale of the proceedings being very limited proportionally. It is expected that the sales will be larger, as papers are now brought out separately; but there is an extra expense in covering every paper published. The system of interchanging publications with kindred institutions, and presenting copies of all publications to the great libraries and observatories, &c., all over the world, hinders greatly the sale of the Academy's publications. The giving of them away, and presenting of them in exchange, is one of the chief reasons of the great expense under contingencies, 482 *l.* 17 *s.* 6 *d.*, in 10 years (*See* Col. 25). This includes the charges on packages in and out, which belong to this system. The special charge for binding, included in the items under this head, in Col. 19, are greatly increased by the binding of the foreign transactions received in exchange for the Academy publications.

Col. 25.

Col. 19.

Col. 7. Life Compositions received.—There are three kinds of life compositions. Non-resident life members pay a lump sum of 15 *l.* 15 *s.* each; resident life members pay 21 *l.* each, and annual members who have paid 20 annual subscriptions of 2 *l.* 2 *s.* per annum, pay 6 *l.* 6 *s.* each; these payments relieving them of any future payments. It is understood, however, that the sums so paid in are held in trust, and are capitalised, the income from each life member being the interest on his life composition paid, and its equivalent in money when he dies; but in practice, the Academy, by spending more than its proper income, has expended about two-thirds of the life composition fund, as it should have stood on the 31st March last.

Col. 8. Entrance Fees.—These are considered as annual income, and as such, are taken into account; they vary, being under 68 *l.* 18 *s.* annually, if the average of ten years be taken, for the sum received in 1857–58 was at least 100 *l.* in excess of the average, and was due to a number of gentlemen joining the Academy, who wished to be considered members during the advent of the British Association. It was this event which gave rise to the extra subscription, 215 *l.* 4 *s.* (see Col. 15), and the special expenditure amounting to 213 *l.* 10 *s.* 3 *d.* in Col. 33. The item at foot of Col. 8 shows an increase on the average of the whole time in the table for entrance fees.

Col. 15.

Col. 33.

Col. 9. Annual Subscriptions received.—Total in ten years, 3,515 *l.* 8 *s.*; average, 351 *l.* 10 *s.* This is over the sum 279 *l.* 6 *s.*, received last year. The falling off is clearly due to the number of annual members who have within a few years become life members, not to a falling off in persons becoming members, as indicated by Col. 8, when latterly the average, 68 *l.* 18 *s.*, has been fully realized, and exceeded last year. There is an arrear of annual subscriptions due at present; and it is found that some people subscribe, and pay their entrance fee only, for some specific object, wanting the *prestige* of the letters M. R. I. A. and never pay any annual subscription. This fact shows that the Cols. 8 and 9 are not entirely dependent on each other; together, they constitute the proper income of the Academy.

Col. 10. Extra Subscriptions.—The first item, 1 *l.*, is the last payment of an old subscription to purchase a certain antiquity. The next payments, amounting to 142 *l.* 11 *s.* 0 *d.*, have been explained, and the payment in the year 1861–62 was towards the purchase of a certain antiquity, which became the property of the Academy by presentation. The subscriptions to buy it were run through the Academy accounts that they might appear hereafter. The total sum, 177 *l.* 6 *s.*, was an extra subscription for museum purposes only.

Col. 11. Interest in Old Academy House.—As the house had been given to the Academy, they sold, and applied the proceeds of the sale to account. The amount, 475 *l.*, however, was, with a few pounds added, invested in Academy Stock, in Col. 28, 500 *l.* 11 *s.* 6 *d.*; but its amount was chargeable with 47 *l.* 2 *s.* (Col. 27), and also with 130 *l.* 5 *s.* 11 *d.* (Col. 30), or 177 *l.* 7 *s.* 4 *d.*, besides a large excess for contingencies in 1853–54 (63 *l.* 15 *s.* 7 *d.*) due to the expenses of moving from the old to the new house (*see* Col. 25), and also the great expenditure for furniture and repairs in 1854–55 (*see* Col. 23), amounting to 215 *l.* 14 *s.* 9 *d.*, so that this sum of 475 *l.* was more than absorbed by expenditure which grew out of the change of location from Grafton-street to Dawson-street.

Col. 28.

Col. 27.

Col. 30.

Col. 25.

Col. 23.

Col. 12. This column contains the amounts received from parties to whom parcels are sent through the Academy from societies abroad; it is necessary as a set-off against contingencies, 482 *l.* 17 *s.* 6 *d.* (Col. 25), which it slightly reduces.

Col. 25.

Col. 13. Government Stock sold.—First item, 464 *l.* 19 *s.* 5 *d.*, is a set-off against 500 *l.* 11 *s.* 6 *d.* in Col 28; it went towards paying 215 *l.* 14 *s.* 9 *d.* and 139 *l.* 9 *s.* 6 *d.* in furniture and repairs on Col. 23. The second item, 980 *l.* 7 *s.* 4 *d.*, went to replace Cunningham Fund Stock, 463 *l.* 9 *s.* 5 *d.* (Col. 29), to catalogue of museum, 355 *l.* 18 *s.* 4 *d.* (Col. 32), photographic room, intended to have been used in aid of catalogue, 14 *l.* 15 *s.* 5 *d.* (Col. 32), and 88 *l.* 13 *s.* 4 *d.* for medals (Col. 34), as this sum, besides the 463 *l.* 9 *s.* 5 *d.*, was due by the Academy to the Cunningham Fund. The printing that year was also heavy, so the whole of the proceeds of the stock sold, 980 *l.* 7 *s.* 4 *d.*, disappeared in squaring the expenditure and income, and two stock accounts of the Academy. Since 1857–58, no Academy stock has been sold, the treasurer buying, when opportunity offers, towards realizing the capital due by the Academy to the life composition, or Academy Stock Account. His purchases are in Col 28, where they may be compared with the sums paid in the actual years 1857–63 (*see* Cols. 28 and 7).

Col. 23.

App. No. 14.

Col. 14. Cunningham Fund sold.—62 *l.* 4 *s.* 4 *d.* This was in aid of a payment of 88 *l.* for medals, paid directly out of the fund, the difference being an error detected in purchases of stock on Academy Life Composition account, which was thus corrected, and the two stock accounts made correct.

Col. 15. British Association Conversazione Fund.—It was thought better to bring the income and expenditure under these heads (*see* Col. 33), 213 *l.* 10 *s.* 3 *d.*, as it led to an audit of the account, and it placed on record details which might be of use hereafter, if the same circumstances were to arise.

Col. 16. Catalogues sold, proceeds of, amount, 241 *l.* 7 *s.* To this sum should be added the subscriptions, 175 *l.* 9 *s.* 6 *d.*; total, 416 *l.* 16 *s.* 6 *d.* on Academy Account; 200 *l.* Government grant (*see* Col. 3); total, 616 *l.* 16 *s.* 6 *d.*, to be deducted from 922 *l.* 5 *s.* 6 *d.*, the balance, 305 *l.* 9 *s.* having been paid by the Academy. Special grants for 250 *l.* and 41 *l.* 5 *s.* 11 *d.* were made on the 16th March 1857, and the 9th November 1857 respectively. The sum of 4 *l.* 10 *s.* 5 *d.* was subsequently voted by Council to defray expenses of binding Part I.

Col. 3.

Col. 17. Subscriptions to Catalogue.—The amount 175 *l.* 9 *s.* 6 *d.* was contributed chiefly by Members of the Academy, but there is a charge of 12 *l.* 17 *s.* 6 *d.* included in it, made by the Committee of Publication against Sir W. Wilde, for "alterations on proofs," above 14 *s.* per sheet; the Committee and Sir W. Wilde, with the concurrence of that gentleman, having previously adopted 14 *s.* per sheet as the maximum charge for alterations on proofs. As Sir W. Wilde considered this sum in the light of a subscription to the fund, instead of a charge payable by him directly to the printer as an overcharge on the Academy, the money having been paid by him to the Council, it was received, and with the concurrence of the Treasurer (*see* Proceedings Vol. VIII, Appendix, p. 2), it was taken to account as a subscription, and is included in the sum of 15 *l* 17 *s.* 6 *d.*

Col. 18. Tidal Observations.—£. 50. This is a special donation from the Treasurer. £. 20 has been paid from it (*see* Col. 35), leaving a balance of 30 *l.* which was included in the balance 79 *l.* 11 *s.* 3 *d.*, in hand 31st March 1864, just past.

Col. 19. Books, Printing, &c.—Under this head have been included printing transactions and proceedings, books bought for library, stationery used, altogether in 10 years 3,674 *l.* 5 *s.* 9 *d*, or 367 *l.* 8 *s.* average, which being compared with 348 *l.* 12 *s.* 6 *d.*, last year's expenditure, exhibits a small decrease.

Col. 20. Antiquities bought.—In 10 years 868 *l.* 16 *s.* 3 *d.*, average 86 *l.* 17 *s.* The gross sum 868 *l.* 16 *s.* 3 *d.*, by special grants 350 *l.* (Col. 3); extra private subscriptions 177 *l.* 6 *s.* (Col. 10), or together 527 *l*, 6 *s.*, which gives a balance of 331 *l.* 10 *s*, or an average amount of 33 *l.* expended annually by the Academy out of its proper income on antiquities, or rather invested, as the antiquities bought are deposited in the museum. If this sum, 331 *l.* 10 *s.*, is to be considered as invested, it is to be carried to the credit of Academy Stock Account, and will so far reduce the debt due by the Academy to the Life Compensation Stock Account.

Col. 21. Repairs of House.—Total, 204 *l.* 19 *s.* 5 *d.*, and 8 *l.* 6 *s.* 3 *d.* for last year. These charges are for repairs and alterations on house not paid by Board of Public Works, who are in charge of the house, and who keep it in general repair, paying rent, &c. As the Treasurer's account is entirely distinct from the account of the Board of Public Works, his accounts for audit supply no information as to the expenses of the New Academy house, defrayed by Parliament through the Board of Public Works. Whatever these charges are they should be added to Col. 2, to give the exact annual Parliamentary aid given to the Academy.

Col. 22. Taxes and Insurance.—Chiefly the latter, intended to cover library, museum and furniture in house in case of fire. The house it is believed is not insured by Board of Public Works, neither is it by the Academy.

Col. 23. Furniture, &c.—Total, 477 *l.* 16 *s.* 4 *d.* This large amount was due chiefly to purchases made in 1854–55 & 1856 for carpets, chairs, &c., but on the average it is not much over or under 10 *l.* per annum. It is, however, to be observed that the fitments or furniture for the Academy meetings, and Council meetings, are of a temporary character, and that a considerable expenditure of money is necessary to supply proper benches, chairs, and tables, for the respectable and convenient accommodation of persons attending the meetings of the Academy and Council.

Col. 24. Salaries.—Total in 10 years 3,838 *l.* 15 *s.* 8 *d.*, or 383 *l.* 17 *s.* per year, and 386 *l.* 10 *s.* 7 *d.* for 1863–64. This amount covers the salaries of clerk or assistant secretary, accountant, curator of museum, assistant librarian, and assistant clerk, the nominal salaries of treasurer, secretary of the Academy, secretary of Council, and librarian, whose expenditure, in connection with their offices, the 21 *l.* each which they get is expected to cover. The salaries of the two porters, and their liveries, are also paid out of the annual charge for salaries, and also the money paid to a charwoman, who is employed by the day when required in cleaning the rooms after meetings, washing the stairs and passages, washing towels and cloths, and other work necessary to keep the place clean, there being no female servant on the establishment. The Return shows that no real increase in the annual

annual charge for salaries, &c., has been made within the 11 years specified, though the value of money has greatly decreased in the same time.

Col. 25. Contingencies.—Total, 482 *l.* 17 *s.* 6 *d.* These are charges chiefly for books received from abroad, and might, to a great extent (more than three-fourths), be properly charged against books in the library, which, though not actually bought, cost the Academy (out of pocket directly), the amounts paid on their delivery as parcels.

Col. 26. Paid Board of Public Works.—This has been explained already. The several amounts were received from Treasury and handed over to Board of Works towards their expenditure on New Academy House.

Col. 27. Expenses on Old House.—This expenditure was on house in Grafton-street.

Col. 28. Academy Stock, Cost of.—The several items in this column have been explained above.

Col. 29. Cunningham Fund Stock, Cost of.—Explained above.

Col. 30. Expenses on New House.—The items, in this column have been explained above.

Col. 31. Catalogue of Museum.—Nearly the whole of the sums, 905 *l.* 11 *s.* 1 *d.* and 16 *l.* 14 *s.* 5 *d.*, were paid on account of the preparation, printing, binding, and publication of the catalogue, the amount having been covered by Government grant 200 *l.* (Col. 3.) Subscriptions 175 *l.* 9 *s.* 6 *d.* (Col. 17), and catalogues sold 226 *l.* 15 *s.* 10 *d.* and 14 *l.* 11 *s.* 2 *d.* (Col. 16), and by votes from the Academy on 16th March 1857 of 250 *l.*, and on 9th November 1857 for 41 *l.* 5 *s.* 11 *d.*, together 291 *l.* 5 *s.* 11 *d.*; there were also two small sums ordered (4 *l.* 10 *s.* 5 *d.* and 5 *l.*) by the Council.

Col. 32. Photographic Apparatus.—This was bought in the hope of its being useful in copying M.SS., and also in taking pictures of antiquities.

Col. 34. Cunningham Medals,—These items have been explained above. These premiums or medals are given every third year, if the Council consider it fit and proper, for the best papers published by the Academy, or for the best works published in Ireland on science, polite literature and antiquities, or if published elsewhere on Irish matters.

Col. 35. The Tidal Observations made under the superintendence of the Committee of Science in 1850-51 lay over for reduction and tabulation, and as the Academy funds were not able to bear the expense the Rev. Dr. Carson presented the amount, 50 *l.* (*see* Col. 18), out of which 20 *l.* in this column has been paid, leaving a balance to the credit of this head of service of 30 *l.*, chargeable on balance in hand on 1st April 1864 (80 *l.* 8 *s.* 6 *d.*)

Col. 36. Coals, Gas, &c.—Total in 10 years 527 *l.* 14 *s.* 7 *d.*, average 52 *l.* 15 *s.* This includes the coal consumed in the hot water apparatus, which heats museum and library, and the open fires in house, and gas used at meetings and in rooms and passages, the use of candles being avoided as much as possible.

INCOME of the Royal Irish Academy from 1 April 1853

Financial Years.	1. Balances on 1st April.	2. Parliamentary Grants, &c.	3. Extra Grants from Treasury.	4. Cunningham Interest.	5. Academy Interest.	6. Proceeds of Publications Sold.	7. Life Compositions Received.	8. Entrance Fees Received.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d	£. s. d.
1853-54 - -	198 11 –	410 3 3	- -	53 8 8	29 4 –	23 18 2	39 18 –	78 15 –
1854-55 - -	52 – 5	475 14 7	- -	53 8 7	36 17 10	1 6 8	70 7 –	52 10 –
1855-56 - -	32 10 1	534 11 7	For Clare find 150 – –	59 6 4	19 7 10	14 8 6	171 3 –	36 15 –
1856-57 - -	249 2 11	533 – –	- -	34 6 4	36 17 10	1 17 11	63 – –	68 5 –
1857-58 - -	69 16 1	500 – –	- -	41 2 –	7 15 1	24 8 –	136 10 –	157 10 –
1858-59 - -	13 15 1	500 – –	- -	48 1 8	11 13 5	13 1 6	52 10 –	42 – –
1859-60 - -	140 16 11	500 – –	For Catalogue 200 – –	48 11 5	14 7 –	19 12 –	103 19 –	47 5 –
1860-61 - -	538 4 2	500 – –	- -	50 8 2	19 13 1	- -	99 15 –	68 5 –
1861-62 - -	150 12 –	500 – –	- -	51 11 4	28 2 6	32 19 8	54 12 –	85 5 –
1862-63 - -	61 6 8	500 – –	- -	51 18 4	29 16 4	6 2 2	99 15 –	52 10 –
	—	4,953 9 5	350 – –	502 2 10	233 14 11	137 14 7	891 9 –	689 – –
Average of 10 Years	- - -	- -	- -	50 4 –	23 7 –	13 15 –	89 2 –	68 18 –
*1863-64** - -	70 11 3	*500* – –	- -	*51 19 6*	*16 17 8*	*13 12 8*	*116 11* –	*73 10* –

EXPENDITURE of the Royal Irish Academy from 1 April 1853

Financial Years.	19. Books, Printing, and Stationery.	20. Antiquities Bought.	21. Repairs of House.	22. Taxes and Insurance.	23. Furniture and Repairs.	24. Salaries.	25. Contingencies.	26. Paid Board of Works.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
1853-54 - -	297 6 8	11 – – 23 15 10	1 10 4	31 2 1	15 14 8	336 10 –	63 15 7 1 10 4	146 17 8
1854-55 - -	132 8 7	149 10 10	6 15 1	29 11 1	215 14 9	390 3 6	39 11 2	140 9 4
1855-56 - -	602 6 8	372 12 –	15 15 11	27 4 3	139 9 6	401 15 8	38 18 –	69 16 10
1856-57 - -	663 1 10	45 10 –	10 14 1	24 6 9	23 14 9	363 13 6	39 13 4	- -
1857-58 - -	411 19 –	66 19 4	97 8 3	20 19 5	41 17 11	404 14 6	59 3 7	- -
1858-59 - -	297 3 3	41 18 1	14 14 5	19 13 5	11 9 11	384 5 –	25 10 –	- -
1859-60 - -	172 11 –	58 – 8	8 1 9	19 18 1	6 7 6	390 4 6	42 12 4	- -
1860-61 - -	231 19 1	17 18 –	12 16 3	16 18 10	4 13 3	392 3 –	30 16 8	- -
1861-62 - -	397 1 10	70 – 6	25 18 3	22 17 4	11 3 7	387 10 –	55 15 7	- -
1862-63 - -	468 7 10	11 11 –	11 5 1	16 18 10	7 10 6	387 16 –	85 10 11	- -
	3,674 5 9	868 16 3	204 19 5	229 10 1	477 16 4	3,838 15 8	482 17 6	357 3 10
Average of 10 Years	367 8 –	86 17 –	20 10 –	22 19 –	47 15 –	383 17 –	48 5 –	- -
*1863-64** - -	*348 12 6*	*16 14 5*	*8 6 3*	*16 18 10*	*10 13 11*	*386 10 7*	*36 3 1*	- -

* The Annual Account for 1863–64, ending 31 March 1864, has not been audited, the entries in *italic*

28 April 1864.

to 31 March 1863, compiled from the Accounts supplied to the Audit Office.

9. Annual Subscriptions Received.	10. Extra Private Subscriptions for Purchase of Antiquities.	11. Interest in Old House.	12. Contingencies, &c., Received.	13. Government Stock Sold, Produced in Cash. Academy Stock.	14. Cunningham Fund, Sold, Produced in Cash.	15. British Association Conversazione Subscription.	16. Catalogues Sold.	17. Subscription to Catalogue.	18. Donation to Tidal Observations.
£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
361 4 –	Domnach airgid. 1 – –	475 – –	5 5 9	—	—	—	—	—	—
407 8 –	11 1 – – / 58 1. – Clare find.	– –	– 11 –	—	—	—	—	—	—
411 12 –	£. 142 / 77 10 – Clare find.	– –	3 3 –	464 19 5	—	—	—	—	—
308 14 –	6 – – Clare find.	– –	– 4 6	—	—	—	—	—	—
291 18 –	– – –	– –	8 8 –	980 7 4	– –	215 4 –	50 12 –	—	—
451 10 –	– – –	– –	– 1 6	– –	– –	– –	62 2 8	—	—
342 6 –	– – –	– –	– 8 9	– –	– –	– –	8 14 –	140 12 –	—
212 2 –	– – –	– –	1 14 6	– –	– –	– –	53 16 9	19 – –	—
329 14 –	Sheakill Molaise. 33 15 –	– –	1 7 6	– –	– –	– –	24 10 7	15 17 6	50 – –
399 – –	– – –	– –	– –	– –	62 4 4	– –	26 19 10	—	—
3,515 8 –	177 6 –	475 – –	21 4 6	1,445 6 9	62 4 4	215 4 –	226 15 10	175 9 6	50 – –
351 10 –	– – –	– –	2 2 –	—	—	—	—	—	—
279 6 –	– – –	– –	– –	– –	– –	– –	*14 11 2*	—	—

to 31 March 1863, compiled from the Accounts supplied to the Audit Office.

27. Old Royal Irish Academy House.	28. Academy Stock Cost.	29. Cunningham Fund Cost.	30. Expenses on New House.	31. Catalogue of Museum.	32. Photographic Room, &c.	33. British Association Conversazione.	34. Cunningham Medals.	35. Tidal Observation.	36. Coals, Gas, &c.
£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
44 16 3	500 11 6	– –	109 5 11	– –	– –	– –	– –	– –	41 10 7
2 5 9	– – –	– –	21 – –	– 4 9	– 12 9	– –	– –	– –	48 7 5
– –	– – –	– –	– –	– –	10 15 –	– –	– –	– –	47 10 –
– –	– – –	– –	– –	5 4 6	– –	– –	– –	– –	55 13 8
– –	159 3 6	463 9 5	– –	355 18 4	14 15 5	213 10 3	88 13 4	– –	71 3 2
– –	109 4 –	24 2 11	– –	73 14 3	– –	– –	– –	– –	52 3 8
– –	173 5 –	48 11 5	– –	52 9 8	– –	– –	– –	– –	56 6 –
– –	299 15 –	50 8 2	– –	307 8 7	– –	– –	– –	– –	46 19 10
– –	54 12 –	51 11 4	– –	90 2 7	– –	– –	88 – –	– –	55 13 7
– –	101 17 –	26 9 2	– –	20 8 5	– –	– –	– –	20 – –	52 6 8
47 2 –	1,398 8 –	664 12 5	130 5 11	905 11 1	26 3 2	213 10 3	176 13 4	20 – –	527 14 7
– –	– – –	– –	– –	– –	– –	– –	– –	– –	52 15 –
– –	*110 5 –*	*51 19 6*	– –	*16 14 5*	– –	– –	– –	– –	*52 10 5*

figures have not been passed or certified by Audit Office; they are entered here to bring the account to the latest moment.

Edward Clibborn, Accountant,
Royal Irish Academy.

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3. *Objections to the Constitution of the Commission, their Conduct of the Inquiry, and their Report.*
4. *Defence of the Commission on the foregoing Charges.*

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Statement that the relations between the Royal Dublin Society and the National Gallery Trustees were not one of the special objects of inquiry of the Commission of 1862; 5672, 5673——Witness recommended in his report in December 1861, that the rent payable by the National Gallery should be capitalized, but this was objected to by the Treasury, 5673-5675——The question of a suppression of the Museum of Irish Industry was not directly submitted to the Commission by the Treasury, 5676, 5677.

The Royal Dublin Society was informed by the Treasury of the issuing of the commission, but witness is not aware that the Museum of Irish Industry was informed, 5678-5681——Witness communicated with Sir R. Kane with a view to his giving evidence before the Commission, 5682-5685——The persons examined were all members or officers of the Royal Dublin Society, and the sittings were held within the walls of the society, 5686-5690.

Reference to a suggestion by the Rev. Mr. Haughton to the Commission of 1862 relative to the geological survey collection; explanation hereon as to the Commission not having examined Sir Roderick Murchison or Professor Jukes, 5691-5701——Circumstance of the Commission not having examined any of the professors whose offices were proposed to be abolished, 5702-5704——Nor was any person examined as representing the National Gallery, 5705. 5715-5717. 5727——Examination upon the question of the National Gallery not having been built entirely at the public expense, whereas the Commissioners proposed to appropriate a portion of it for the geological survey collection, 5706-5726. 5757-5759.

Non-inquiry by the commission into the Royal Irish Academy and other scientific institutions; reference hereon to a suggestion in the report in favour of a voluntary affiliation of these societies to the Royal Dublin Society, 5728-5730——Further reference to the documentary evidence by which the Commissioners were partly guided; personal experience also of the Commissioners relative to the matters under inquiry, 5731-5737——Inference from a statement by Sir R. Kane, before the Commission, as to the Museum of Irish Industry not having attained the popularity which might have been wished, 5738, 5739.

Necessary reference to the question of funds by which the Science and Art Department are guided upon the question of a central school of industry in Ireland, 5740-5742——Further statement as to the scope of teaching of the Jermyn-street Institution in connection with mining, with reference to the operation of a similar school in Dublin, 5743-5749——The evidence before the present Committee has not in any way changed the views which witness held as a Commissioner in 1862, 5750-5752——Witness, as an officer of the Science and Art Department, represented to some extent the Museum of Irish Industry at the Commission, 5753-5756.

Dowling, Mr. Reference to a statement by Mr. Dowling as to his want of confidence in the Dublin Society as a means of conveying scientific and practical knowledge, *M'Evoy* 407-414. 517, 518. 576-595.

Further statement as to the objection of Mr. Dowling and other Roman Catholics to the constitution of the Dublin Society, Mr. Dowling having learnt at the Industrial Museum all he knew, where however the several evening lecturers were Protestants, *M'Evoy* 728-733.

Inaccuracy of a statement by Mr. Dowling as to there being a wide-spread objection to receiving education at the Dublin Society on account of its sectarian character; circumstance of Mr. Dowling having himself been a pupil there, *Steele* 2796-2802——Circumstance also of Mr. Dowling, though speaking slightingly of the lecturers, having on more than one occasion applied to be a lecturer, *ib.* 2863-2871.

Drogheda. Statement as to Drogheda having had a course of lectures in 1861; there probably has been an application since that period which could not be complied with, *Sidney* 1695-1699——Reference to the non-attendance of the Protestant gentry at some lectures delivered by witness at Drogheda, *Sullivan* 3398-3403.

Dublin Society. See *Royal Dublin Society.*

Dunlo, Lord. (Analysis of his Evidence.)—Is one of the Honorary Secretaries of the Royal Dublin Society; has been a practical agriculturist for many years, 4283-4285——Particulars relative to the veterinary establishment formerly in connection with the Royal Dublin Society, the principles upon which it was founded and conducted, and the causes of its discontinuance, 4286-4305——Report by a committee of the society (of which committee witness was a member) in November 1860, and recommendation therein as to the minimum establishment required for a veterinary school, and as to the minimum expense, 4286, 4287. 4306-4317.

Several advantages already possessed by the Dublin Society as regards the expense of staff, building, &c., for a veterinary department, 4312-4321. 4344-4350. 4376-4378——General feeling throughout Ireland as to the want of a veterinary institution; important benefits

Dunlo, Lord. (Analysis of his Evidence)—*continued.*

benefits anticipated from its operation, 4322. 4330–4333. 4338–4342. 4351. 4360–4375——Grounds for concluding that neither the Royal Agricultural Society nor any other body in Ireland could so advantageously as the Royal Dublin Society undertake the carrying out of the proposed institution, 4323–4329. 4343–4354. 4376–4378.

Failure of an attempt by a private company to establish a veterinary institution in Dublin, 4326–4328. 4363, 4364——Respects in which it may be argued that Government should aid the Dublin Society in the matter, 4328. 4334–4336. 4352–4359——Great want of veterinary surgeons in country towns in Ireland, although there is now a greater necessity for them than formerly, 4368–4375.

E.

Ecole Céntrale des Arts et Manufactures. Witness does not propose an institution on quite so extensive a scale as the Ecole Céntrale des Arts et Manufactures; distinction between this institution and the Conservatoire des Arts et Métiers, *Sullivan* 3565. 3582–3588.

Edinburgh Industrial Museum. Comment on the suggested abolition of the museum in Stephen's Green, which cost only 10,000 *l.* about ten years ago, whilst an industrial museum is being built at Edinburgh at a public cost of about 40,000 *l.*, *Jukes* 1946–1949.

Education or Scientific Instruction:

1. *Exceptions taken to the operation of the system under the Royal Dublin Society.*
2. *Objections to Educational Arrangements being entrusted to any private or fluctuating body.*
3. *Evidence in defence of the Dublin Society as a means of carrying out Scientific Education.*
4. *Suggestions on the subject of increased Educational Functions in the Museum of Irish Industry.*
5. *Expediency of Individual Direction and Control.*
6. *Other Evidence and Suggestions generally.*
7. *Conclusions and Recommendations of the Committee.*

1. *Exceptions taken to the operation of the system under the Royal Dublin Society:*

Respects in which the system of lectures, as carried out by the Dublin Society, is defective and inefficient, *M'Evoy* 576–595. 687, 689——Witness, though objecting to the present system, cannot say, however, that anything of a sectarian character has ever been stated at the lectures of the Dublin Society, *Corrigan* 741, 742——System of appointment of professors and lecturers by the society, and considerations hereon as to the inexpediency of the system on the score of principle; witness does not imply, however, that other than most excellent lecturers have been appointed, *ib.* 840–863. 871–901——Objections to its being optional in lecturers under the Dublin Society in regard to the choice of subjects upon which to lecture, *ib.* 883–885. 905.

Consideration as to the system of lectures of the Dublin Society and Industrial Museum respectively, and as to the respects in which amendment is desirable, *Barker* 1243–1256. 1282——Witness has not been unduly interfered with in respect of the lectures of the Royal Dublin Society, but the committee are a changeable body, *ib.* 1275–1281——He sees no objection to the lectures being given within the four walls of the society, *ib.* 1282.

Objectionable character of the arrangements in regard to popular lectures; understanding or compromise on this point with the Royal Dublin Society, *Sir R. Kane* 1346–1356——Statement of the amended arrangements contemplated by witness on the score of lectures, &c., the two institutions having entirely different functions to perform, *ib.* 1370, 1371. 1418, 1419. 1426–1432——Examination relative to the operation of the Committee of Lectures, and the probable effect of a system whereby lectures should be entirely under the Royal Dublin Society; grounds for objecting to the latter plan further considered, *ib.* 1463, *et seq.*

Consideration of witness's grounds for the conclusion that professors would, in all probability, be subject to a very annoying action, if placed under the Council or Committee of the Dublin Society, *Jukes* 2156–2194——Statement as to witness, in his capacity of lecturer at the Museum of Irish Industry, being subject to the control of Sir R. Kane; his willingness to submit to all proper control, *ib.* 2223–2231.

Decided disapproval of the system of distinct lectures upon the same subject at different places, witness finding it quite useless to connect the two courses, *Sullivan* 3189–3195——Disadvantages under which the professors have laboured who have given courses of lectures, both in the Royal Dublin Society and Museum of Irish Industry, *Galloway* 3642–3644.

Report, 1864—*continued.*

Education or Scientific Instruction—continued.

2. *Objections to Educational Arrangements being entrusted to any private or fluctuating body:*

Witness objects to Government devolving educational functions upon any private society, constituted chiefly of a particular class or denomination, like the Royal Dublin Society, *M'Evoy* 734–740——Grounds for concluding that the Royal Dublin Society, as being a large and popular society, is likely to be led by prejudices, and is not competent to regulate scientific education, *Corrigan* 809 *et seq.*——Approval of a proposition for relieving the society from its functions in regard to the supervision of scientific education, as by the appointment of professors, *ib.* 832–850.

Further examination upon the question of the unfitness of the society to superintend scientific instruction, on account of its constitution, and the system of its council being elective, *Corrigan* 836 *et seq.* 888-901——On the whole, witness concludes that a large popular society is a most unsuitable body to undertake or direct the mode of carrying out scientific education, *ib.* 902-906.

Approval of a proposition for relieving the Dublin Society from the direction of scientific education, and for confining the society to educational functions, *Barker* 1239–1242; *Sullivan* 3325, 3326; *Morgan* 3854, 3855——Respects in which the Royal Dublin Society as being a popular and fluctuating body, are not calculated to direct efficiently an extended education system, *Sir R. Kane* 1315. 1375–1378. 1421——Opinion that the efficiency of the society would not be at all impaired if it were deprived of its educational functions, *ib.* 1417, 1418. 1426——A scheme of real industrial education could not, in fact, be carried out by such a body as the Dublin Society, and any attempt to do so would be dangerous to the society, *ib.* 1425. 1463. 1466. 1489.

Grounds upon which witness protested against the compromise of 1854, and still objects to the system as carried out under the Committee of Lectures, *Jukes* 1954–1961——Reasons for objecting to the proposal of the Commissioners of 1862 that witness should be attached, as lecturer, to the Royal Dublin Society, *ib.* 1975–1977——Objections to any system of the Council of the Royal Dublin Society, or to any other council or committee, as a means of control of professors of scientific education, *ib.* 1977-1983. 2331–2334——Absence of analogy between the Dublin Society and the Electoral Roll of Cambridge, *ib.* 1983. 2195–2210——Witness objects to being placed under any one except he be a man of science, *ib.* 2186, 2187.

Objection to a large private society like the Dublin Society being entrusted with the management of natural museums and of national industrial education, *Sullivan* 3303–3306——Inexpediency in any case of Government control and state support being exercised and administered through a fluctuating body like the Royal Dublin Society, *ib.* 3569–3571.

Disapproval of an extended system of lectures being under a fluctuating body like the Royal Dublin Society or its council, *Morgan* 3730–3736. 3743–3746. 3763. 3773——Strong objection to a public museum being under a private body, *ib.* 3837——Doubt whether the Dublin Society is really a popular or unpopular body, *ib.* 3912–3918.

Witness fully admits the eminent character of the individuals on the council and committees of the Royal Dublin Society and testifies to the great utility of the society, but considers that any voluntary association is not a desirable body for the carrying out of an extended educational system, *Graves* 5125 *et seq.*, 5214-5221.

3. *Evidence in defence of the Dublin Society as a means of carrying out Scientific Education:*

Contemplated formation of a special and permanent committee for the superintendence of the lectures if the society were entrusted with extended educational functions, *Lloyd* 1162. 1172-1177——Dissent from the view that the popular constitution of the Dublin Society renders it less effective in its scientific instruction, *ib.* 1176-1178——Advantage of the museum or collections of the Dublin Society in carrying out extended educational functions, *ib.* 1192-1195.

Recommendation that if the educational arrangements were all under the Dublin Society hey should be subject to a small or permanent committee as suggested by Dr. Lloyd, *Sidney* 1771, 1772. 1784——Belief as to the fitness of the Royal Dublin Society for carrying out the educational functions of both institutions; system of appointment of professors t Cambridge adverted to hereon, *ib.* 1783-1790.

Opinion as to the entire fitness of the Royal Dublin Society to carry out an extended system of scientific education, if the Museum of Irish Industry were amalgamated with the society, *Lord Talbot de Malahide* 2408–2413. 2417. 2442. 2448.

Restoration of certain educational functions to the Royal Dublin Society, if the Report of the Commission of 1862 were carried out, *Donnelly* 5545, 5546——Conclusion as to the fitness of the society, its council being reconstituted, to undertake the functions proposed to be entrusted to it by the Commissioners of 1862, *ib.* 5549. 5553.

EDUCATION OR SCIENTIFIC INSTRUCTION—continued.

4. *Suggestions on the subject of increased Educational Functions in the Museum of Irish Industry:*

With regard to the extension of staff required by the Museum of Irish Industry, there should be two additional professorships, similar to corresponding ones in Jermyn-street, *Sir R. Kane* 1372–1374——The Museum of Irish Industry should not in any way go beyond the limits of industrial education, *ib.* 1429.

Suggestions as to the Institution dealing with everything relating to the mineral kingdom, *Jukes* 2009–2015——Necessary addition of staff to be made to the Industrial Museum, in order to assimilate it to the Jermyn street Institution, *ib.* 2098–2100.

Proposition that the manufacturing industry in Ireland be divided into five categories, for which instruction should be given in one school, such as the Museum of Irish Industry; limited addition of staff required for this purpose, *Sullivan* 3235–3241. 3501. 3525——Absence of any very great expense in carrying out witness's suggestions, either on the score of staff or of building accommodation, *ib.* 3474–3480.

Suggestion that the direction and scientific officers of the Industrial Museum should form a council which should meet for the general carrying out of the educational arrangements, *Galloway* 3646–3648——Recommended establishment of the Museum of Irish Industry as an industrial school on an improved basis, *Morgan* 3755, 3756——Decided preference for the Museum of Art Industry as compared with the Royal Dublin Society as the body to be intrusted with educational functions, *Wright* 3849–3855——Grounds for the opinion that the sphere of instruction in the Irish Industrial Museum should be extended beyond that of the Jermyn-street Institution, and should embrace such subjects as the preparation of flax, &c., *Graves* 5198–5213.

5. *Expediency of Individual Direction and Control:*

Experience upon which witness considers that it would be better if the professors or lecturers were under a permanent single head instead of under a fluctuating body, like the committees of the society, *Barker* 1223–1228. 1275–1281.

Necessity of a single head over the professors or lecturers, *Sir R. Kane* 1423, 1424——Advantage of a direct and individual control in respect of students receiving scientific instruction as compared with the control by a popular body, *ib.* 1519–1524——Expediency of all lectures being under the control of a single head responsible directly to the Committee of Council, the Royal Dublin Society not having any power or control, *ib.* 1561–1570——Objection, however, to a system whereby the Royal Dublin Society, or the Council, might appoint an individual in charge of the lectures and of scientific education generally, *ib.* 1586–1598.

Objections to any system of scientific education in Ireland being intrusted to any control other than that of an individual directly responsible to Government, *Jukes* 1977–1983. 2331–2334——There should, in fact, be one person at the head of a system of scientific education, with a view to an efficient supervision of the professors and of the system, *ib.* 2331. 2334.

Unity of plan and of organisation under direct Government control, is the main object to be desired, *Sullivan* 3567–3569——Opinion favourable to individual control, under Government, of all systematic instruction which is followed by examinations and prizes, *Wright* 3859. 3879. 3885–3895.

6. *Other Evidence and Suggestions generally:*

Disapproval of a body of professors under an individual director; advantage rather of a Government Board for the direction of an extended system of scientific education in Ireland, *Corrigan* 834, 835. 868, 869——There should, in fact, be a Board or controlling body, as in the case of the London University, for superintending the lectures of the professors, *ib.* 870. 885–899.

Disadvantages of the double locality and the double control in regard to the delivery of the lectures in Dublin, *Lloyd* 1146, 1147——Importance of the lecture being delivered in the locality of the Museum, *ib.* 1147, 1148.

Conclusion as to the necessity of instruction in the theory of science in order to become efficient in regard to the practical application of science, *Sir R. Kane* 1329–1331——Suggestions as to the amendments desirable in regard to the lectures of the two institutions if retained separately, *ib.* 1357, 1358. 1370, 1371. 1418, 1419. 1426–1432——Improvement if the popular lectures were limited to the evening, *ib.* 1357, 1358. 1370.

Considerable extent to which lectures might still be given at the Dublin Society under the system contemplated by witness; not, however, on the ground of the existence of the collections there, *Sir R. Kane* 1418, 1419. 1426. 1428. 1461, 1462. 1541–1548——Witness recommends that there be a staff of professors under the control of the Director of the Industrial Museum for giving lectures purely on scientific purposes, *ib.* 1456——Great importance to Ireland of a comprehensive scheme of scientific education, *ib.* 1460.

Report, 1864—*continued.*

Education or Scientific Instruction—continued.

6. *Other Evidence and Suggestions generally*—continued.

Extent to which desirable that lectures should be given in connection with specimens or collections as at the Dublin Society and Industrial Museum respectively, *Sir R. Kane* 1541–1560——Dissent from the views of Dr. Corrigan in approval of the professors generally being subject to a Board rather than to one head or to the Museum of Irish Industry, *ib.* 1571–1576.

Three alternatives or courses open in regard to the educational arrangements in the Royal Dublin Society and Museum of Irish Industry, *Sidney* 1771——In the event of the professors and lecturers being divided between the two institutions the system can best be conducted by a committee jointly selected, *ib.* 1771. 1775, 1776——Approval of the suggestion by Sir R. Kane, that the public lectures should be delivered altogether in the evening, *ib.* 1831, 1832.

Objectionable operation of the system of popular lectures forced upon the Museum of Irish Industry and the Geological Survey Department, and great improvement on this score, if the department were free to devise and carry out a really attractive system, *Jukes* 1954–1968.

Arguments in favour of State support to industrial scientific teaching in Ireland, *Sullivan* 3244–3252. 3269–3275——Greater want in Ireland than in England of a great school of industrial education; expected encouragement of manufactures thereby, *ib.* 3244–3246. 3250–3553.

Further statement as to the several subjects of study desirable to be comprised in the proposed institution; incompleteness of the Royal Dublin Society in respect of several of these subjects, *Sullivan* 3501–3525——Proposed establishment of a scholarship, tenable for a year, out of the money now spent in prizes, *Galloway* 3644. 3649–3651. 3683–3689.

7. *Conclusions and Recommendations of the Committee:*

Recommendation that all systematic instruction followed by examination and prizes, or certificates of competency should be given under the direction and control of one officer, responsible to Government for the efficiency of the system, under similar arrangements to those existing in Jermyn-street, *Rep.* xxii.

Detailed statement in support of the conclusions of the Committee as to the greater fitness of the Museum of Irish Industry than of the Royal Dublin Society to carry out educational functions, *Rep.* xxii, xxvi–xxviii——Grounds for the conclusion that there should be one scientific head for the regulation of scientific instruction, *ib.* xxxiv, xxxv.

See also *Agricultural Department. Amalgamation. Applied Science. Endowed Schools (Ireland). Government Control. Larcom, Sir Thomas. Lectures. Manufactures (Scientific Education). Middle Classes. Mining Instruction. Museum of Irish Industry. Playfair, Dr. Lyon. Private Enterprise. Provincial Lectures. Public, The. Public Schools Commission. Queen's Colleges. Royal Dublin Society. Science Schools. University Degrees. Veterinary Department (Royal Dublin Society).*

Endowment Schools (Ireland). Illustration, in the case of the endowed schools in Ireland, of the inexpediency of entrusting educational functions to any private body or committee, *Graves* 5126–5134. 5214–5221.

Evening Scientific Meetings (Royal Dublin Society). System of monthly scientific meetings at the Dublin Society, at which facilities are given to any person to read scientific papers; how the expense is provided, *Steele* 2772–2774——Character of the subjects treated, and of the attendance at the evening scientific meetings held monthly; beneficial operation of these meetings, *ib.* 3130–3139.

System as to the reading of papers at the evening scientific meetings; very valuable papers read there, *Andrews* 4722–4727——Facility of admission to these meetings which are very well attended, *ib.* 4728–4733——Publication of the papers read at the meetings, out of the private funds of the society, *ib.* 4734–4739.

Valuable operation of the papers throughout the country; instances in the case of salmon fisheries, and deep sea fisheries, in regard to which witness has taken a prominent part, *Andrews* 4740–4746. 4775–4802.

Exchange of Specimens (Royal Dublin Society). Prejudice arising in regard to the exchange of specimens with the Royal Dublin Society, on account of the complicated system of a committee; question as to witness's grounds for this statement, *Wright* 3866–3869. 4004–4027.

F.

Foot, Lundy (the late). Evidence of the late Mr. Lundy Foot before the commission of 1862, adverted to; views then expressed on the subject of the Industrial Museum, *M'Evoy* 367, 368. 717–727.

Report, 1864—*continued.*

Fossils (*Royal Dublin Society*). Statement as to the very limited collection of fossils in the museum of the Dublin Society; examination as to witness's ground for this statement, *Jukes* 1994. 2066-2078.

Very good collection of fossils in the museum of the Royal Dublin Society, which cannot be exhibited for want of cases, *Steele* 2704, 2705. 2712.

Limited sum which the society can expend in purchasing fossils or minerals, the collections being, in fact, chiefly made up of gifts, *ib.* 2706-2711——Want of funds for an arrangement of the fossil collection of the Dublin Society; valuable character of portion of this collection, *Andrews* 4167-4169. 4173-4176.

See also *Geological Survey and Collections.* *Mineralogy* (*Royal Dublin Society*).

G.

Galloway, Robert. (Analysis of his Evidence.)—Explanation of the circumstances connected with the appointment of witness as teacher of practical chemistry in the Museum of Irish Industry, 3619——Importance of a school of science in Dublin with direct reference to industrial manufactures, 3620——Particulars in connection with the establishment of the College of Chemistry in London, and its subsequent amalgamation with the Jermyn-street Institution, 3621-3623——Grounds for concluding that, as a school of mines, the institution in Jermyn-street has failed; and that it has been highly successful as a means of general scientific education, 3624, 3625.

Feeling of the public opposed to the money of the State for industrial education being entrusted to a private society, 3626, 3627——Respects in which the students would be at a disadvantage under a private society, as compared with being under a Government institution, 3628-3632. 3678, 3679——Much too large scope embraced by the Royal Dublin Society, 3632-3635——Disapproval of free popular lectures, as not producing any positive results, it not being, moreover, the duty of the State to create a taste for science, 3636-3641. 3690-3694.

Disadvantages under which those professors have laboured who have given courses of lectures, both in the Royal Dublin Society and Museum of Irish Industry, 3642-3644——Expenditure of 50*l.* a year in prizes at the Museum of Irish Industry, many students attending the lectures for the sake of the prizes rather than for the instruction; amendment suggested on this score, 3643-3645. 3683-3689. 3695——Proposed establishment of a scholarship, tenable for a year, out of the money now spent in prizes, 3644. 3649-3651. 3683-3689.

Suggestion that the director and scientific officers of the Industrial Museum should form a council which should meet fortnightly for the general carrying out of the educational arrangements, 3646-3648——Number of students attending the practical chemistry class under witness, and character of the work done by them, and of the progress made, 3652-3655——Great aptitude shown by Irish students in the acquisition of scientific knowledge; instances of very satisfactory results in the case of pupils of witness, 3658, 3659.

Advantageous results from the study of organic chemistry; suggestions hereon for extending the advantages of witness's laboratory, 3660, 3661——Considerable labour devolving upon witness and the assistant chemist, witness giving a much more extended course than he at first undertook; question as to the salary of witness and his assistant adverted to hereon, 3662——Proposed system of practical instruction in connection with the teaching of natural philosophy, 3662-3664.

Improvement and economy if the expenditure in respect of furniture, fittings, &c., were undertaken by the Board of Works, 3664-3671——Advantage if the museum were closed one day in the week for cleaning, &c., 3672, 3673——Each department should keep within the share of the grant allotted to it, in regard to incidental expenses, &c., 3675-3677——Impetus to industrial education in Ireland if there were an university degree in science, for which the students of the museum should be eligible, 3680, 3681——Suggestion that the officers of the museum be promoted, as in other Government departments, 3682.

Geological Survey and Collections:

1. *Position of the Irish Geological Survey, with reference to the Museum of Irish Industry; functions of the Local Director.*
2. *Character of the Survey Collections; additional staff and space required.*
3. *Progress made with the Survey.*
4. *Practice in regard to Duplicate Specimens in the Industrial Museum.*
5. *Question as to the arrangement of the Geological Collections in the Industrial Museum and Royal Dublin Society, and as to a transfer of the former Collection to the Dublin Society.*
6. *Explanation that it has not been proposed to give the Dublin Society any control over the Geological Survey and Collections.*

1. *Position of the Irish Geological Survey, with reference to the Museum of Irish Industry; functions of the Local Director:*

Statement as to a large part of the museum being occupied by the offices and collections of the geological survey, witness not having any control over the collections, *Sir R. Kane* 1294-1297.

Report, 1864—*continued.*

Geological Survey and Collections—continued.

1. *Position of the Irish Geological Survey, &c.*—continued.

Witness is local director of the geological survey of Ireland, and lecturer at the Museum of Irish Industry; received the former appointment in 1850, and the latter in 1854, *Jukes* 1922, 1923——Refers to a Treasury Minute of 27th December 1844, and to a letter from Lord Lincoln, dated 13th February 1845, as showing the circumstances and objects under which the geological survey of Ireland was originated, *ib.* 1924——Statement as to the connection between the lectures on geology, &c., and the geological survey, *ib.* 1924. 1926, 1927——Reference to a letter from Lord Lincoln in March 1845, as to the respective duties of the director of the geological survey, and the director of the Industrial Museum, *ib.* 1931, 1932.

Further particulars as to the actual position of witness as local director (under Sir R. Murchison) of the geological survey of Ireland, and as lecturer at the Museum of Irish Industry; how corresponding functions are fulfilled in the London Institution, *Jukes* 2087–2121——The salary of witness as local director is 400*l.* a year, increasing by 25*l.* a year to 600*l.* a year, *ib.* 2089——Exclusive control and care of witness over the rocks and fossils, but not over the minerals and ores, at the Museum of Irish Industry; arrangement hereon in Jermyn-street, *ib.* 2108–2121.

Copy of Treasury Minute dated 27th December 1844, relative to the geological survey of Ireland, and the question of its being placed in connection with a museum in Dublin, *App.* 354.

Letter from the Earl of Lincoln to the Treasury, dated Office of Works, 13th January 1845, with reference to the carrying out of the geological survey of Ireland, and the establishment of an institution in Dublin similar to that in Jermyn-street, *App.* 355–358.

Further letter from the Earl of Lincoln to Dr. Robert Kane, dated 29th March 1845, with reference to the charge by the latter of the Museum of Irish Industry, having in connection with it the geological survey, *App.* 359, 360.

2. *Character of the Survey Collections: additional Staff and Space required:*

Large and increasing character of the survey collections; actual course pursued in regard to the collection of specimens, *Jukes* 1933–1935——Want of additional space for properly accommodating the collections and the maps and sections of the Irish Geological Survey, *ib.* 1943, 1944——Sufficient data at the museum for furnishing complete geological reports upon any districts that have been surveyed; additional staff and space required in order to supply such reports, *ib.* 2271–2273.

3. *Progress made with the Survey:*

Information as to the progress made with the survey since March 1863; difficulty of estimating when it may be completed, *Jukes* 2287, 2288.

4. *Practice in regard to Duplicate Specimens in the Industrial Museum:*

Way in which duplicate specimens are dealt with; approval of a transfer of some of these to the museum of the Royal Dublin Society, *Jukes* 1936–1940——Examination as to the practice in sending geological duplicate specimens to other institutions, and as to the omission to send any to the Royal Dublin Society, *ib.* 2133–2155.

Explanation on the subject of duplicate fossils in the geological collection of the Museum of Irish Industry, as regards the Royal Dublin Society not having made application for any of them, *Andrews* 4648–4651.

5. *Question as to the Arrangement of the Geological Collections in the Industrial Museum and Royal Dublin Society, and as to a transfer of the former Collection to the Dublin Society:*

There is doubtless a different principle of arrangement of the collections of the two institutions, *Lloyd* 1198, 1199.

Information relative to the character and mode of arrangement of the geological and mineralogical collections in the Industrial Museum, and the broad distinction between them and the collections of the Royal Dublin Society, *Sir R. Kane* 1298–1311.

Considerations as to the plan of arrangement and exhibition of the geological specimens in the Industrial Museum; dissent hereon from the views of Professor Naughton and Mr. Lowe, that the survey collections might as well be placed in any other museum unconnected with the geological survey, *Jukes* 1940–1945.

Further considerations as to the most desirable and useful mode of arrangement of fossils; dissent from the views of Professor Haughton on this score, *Jukes* 2079–2086——Advantage of the fossils if the Dublin Society were arranged biologically, those of the Industrial Museum being already arranged stratigraphically, *ib.* 2086. 2125–2127——If the fossils, rocks, and minerals were transferred to a separate building their charge would rest with witness, but he disapproves of any such transfer, *ib.* 2120–2124——Obstacle on account of the want of space to a biological, as well as stratigraphical, arrangement of fossils in charge of witness, *ib.* 2128–2132——Diminished, rather than increased, benefit to the public if the geological department were transferred to the Dublin Society, *ib.* 2211, 2212.

Advantage

Report, 1864—*continued.*

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5. *Question as to the Arrangement of the Geological Collections, &c.*—continued.

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3. *Defects of the present System, and Amendments suggested.*
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Leinster Lawn (*Royal Dublin Society*). Explanation as to Leinster Lawn and the premises generally of the Society being considered by the Society as public property, *Maunsell* 54–60. 192–196——Twofold difficulty in regard to Leinster Lawn being thrown more open to the public, *ib.* 61–63. 185–191——Opinion as to the inexpediency of opening to the public the lawn or small plot of ground in the proximity of the library, *ib.* 266–271.

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1. Explanation and Defence of the present Practice.
2. Question as to Admission Papers having been supplied to the Museum of Irish Industry.
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Museum of Irish Industry:

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2. *Several Departments to which the Museum has been subject.*
3. *Valuable character of the Collections, and of the Instruction afforded.*
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5. *Question as to the Popularity of the Museum generally.*
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7. *Present Staff attached to the Museum proper.*
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MUSEUM OF IRISH INDUSTRY—continued.

10. *Details of Receipt and Expenditure.*
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12. *Examination Papers.*
13. *Feeling expressed in Ireland against the Suppression of the Institution.*
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1. *Origin and Objects of the Institution :*

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Statement as to its having been always contemplated that the Industrial Museum should have a national operation as a school of science and industry, *Sir R. Kane* 1332. 1396–1399——More extended scope of the museum than of the Jermyn-street institution, *ib.* 1411, 1412——Reference to Dr. Playfair's letter of 1854 as constituting the basis of the arrangements under which the educational operations of the Industrial Museum were to be conducted, *ib.* 1444–1449——Original object of the museum further adverted to; communications from Lord Lincoln (when at the Office of Works), showing that a national school of chemistry was contemplated, *ib.* 1450–1455.

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Purport of Dr. Playfair's minute, and object of the Treasury and Science and Art Department in 1854, to confide educational functions to the Museum of Irish Industry, and to restrict the Dublin Society to exhibitional functions, *Donnelly* 5520–5527. 5541–5543.

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2. *Several Departments to which the Museum has been subject :*

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3. *Valuable character of the Collections, and of the Instruction afforded :*

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Fallacy of estimating the value of the museum by the test of the numbers attending, *Sir R. Kane* 1323, 1324——Important object of the industrial collections in the museum as a means of industrial and scientific instruction, not only of the artisan classes, but of the employers of labour, *ib.* 1325, 1326——It is not pretended to teach in the museum anything that must be learned in the workshop, *ib.* 1331——Successful operation of the museum as a means of supplying teachers under the Science and Art Minute, *ib.* 1336–1338. 1402, 1403——The educational arrangements of the museum are at present to a great extent provisional, *ib.* 1339.

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4. *Suggestions as to an Extension of the Staff and Functions of the Institution:*

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Decided preference for the Museum of Irish Industry as compared with the Royal Dublin Society as the body to be entrusted with educational functions, *Wright* 3849–3855—— Grounds for the opinion that the sphere of instruction in the Irish Industrial Museum should be extended beyond that of the Jermyn-street institution, and should embrace such subjects as the preparation of flax, &c., *Graves* 5198. 5213.

5. *Question as to the Popularity of the Museum generally:*

Circumstance of the Industrial Museum not being at present very popular; the principle of the institution is however the right one, *M'Evoy* 684, 685. 762–764——Inference from a statement by Sir R. Kane before the Commissioners of 1862, as to the Museum of Irish Industry not having attained the popularity which might have been wished, *Donnelly* 5738, 5739.

6. *Suggested Closing for One Day in each Week:*

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7. *Present Staff attached to the Museum proper:*

Responsibility of witness for the administration of the museum; officers by whom assisted, *Sir R. Kane* 1340——There is a clerk or accountant, a curator, and several porters; also a chemist of the museum, *ib.*

8. *Means available for Prizes:*

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9. *Amendments suggested in the System of Parliamentary Vote, and in its Distribution:*

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9. *Amendments suggested in the System of Parliamentary Vote, &c.*—continued.

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Proposed re-distribution of the grant in respect of the educational staff at Stephen's Green, *Wright* 4145 and *p.* 234.

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10. *Details of Receipt and Expenditure:*

Particulars in connection with the expenditure of the annual grant to the museum for the purchase of specimens, *Sir R. Kane* 1407-1410.

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11. *Exceptions taken to the Expenditure as compared with the Results:*

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12. *Examination Papers:*

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13. *Feeling expressed in Ireland against the Suppression of the Institution:*

Reference to certain petitions which have been presented against the abolition of the museum; influential names on the petition from Dublin, *M'Evey* 375-381. 516—— Several petitions from provincial towns against the museum being merged into the Royal Dublin Society, *ib.* 754-756——Number of persons forming the association for opposing the abolition of the Industrial museum; small attendance at some of the meetings, *ib.* 780-782.

Selection from the names of signers of the petition against the abolition of the Industrial Museum, and for a Parliamentary inquiry into all subsidized institutions of Dublin, *App.* 366——Opposition made on the part of the provincial towns, *ib.*

14. *Proposed clear definition of the Duties of the Institution, as distinct from those of the Dublin Society:*

Suggestions for carrying out a clear distinction between the functions of the two institutions, if retained separately: it being very desirable that they should not clash in any way, *Lloyd* 1283, 1284.

Proposition that the functions of the Museum of Irish Industry be rendered more definite, and be kept entirely distinct from those of the Royal Dublin Society; the former institution should deal with the mineral kingdom, and everything derived from it, and the latter with agriculture and the organic kingdom, *Jukes* 2009-2015.

15. *Conclusions and Recommendations of the Committee:*

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See also *Adderley, Right Hon. Mr. Amalgamation. Chemical Department. Commission of 1862. Edinburgh Industrial Museum. Education or Scientific Instruction. Geological Survey and Collections. Jermyn-street Museum. Laboratory. Lectures. Library (Museum of Irish Industry). Metallurgy. Middle Classes. Mining Instruction. National Gallery of Ireland, 2, 3. Parliamentary Grants. Peel, Sir Robert (the late). Royal Dublin Society. Science and Art Department. Teachers (Science Schools). Zoological Department.*

Museum of Natural History (Royal Dublin Society):

1. *As to the Facilities of Admission.*
2. *Origin and Scope of the Museum.*
3. *Authority of the Committee of the Museum, and of the Curator, in regard to Purchases and Exchanges.*
4. *Value of the Collections, and Facility for their Inspection.*
5. *Several Wants of the Museum: Aid required from Parliament.*
6. *Suggested Transfer of the Collections to a Central National Institution.*

1. *As to the Facilities of Admission:*

Nature of the facilities of admission to the museum; corresponding system at South Kensington, *Steele* 2838–2843——Necessity of an increase of staff if the museum were open more than three days in the week to the public, *ib.* 2838, 2839——Expediency of certain days being reserved for students, as at the South Kensington Museum, a fee being required on such days from the public, *ib.* 2840–2843.

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2. *Origin and Scope of the Museum:*

Advantage if the Museum of the Royal Dublin Society were confined to natural history, *Sullivan* 3302——Foundation of the museum of the society under special Act of Parliament, the Leskean collection having first been purchased, *Wright* 3828, 3829.

Origin of the Museum of Natural History adverted to by the committee, *Rep.* viii——Expediency of the museum being carefully restricted within its legitimate limits, *ib.* xxxi, xxxii.

3. *Authority of the Committee of the Museum, and of the Curator, in regard to Purchases and Exchanges:*

Power of the committee of the museum to make purchases without previous reference to the council of the society, *Andrews* 4587–4590——Authority of the curator or director of the museum to make purchases to the extent of 5*l.* without previous sanction from the committee, *ib.* 4590. 4634-4638——Statement that Dr. Carte, the director of the museum, is not in any way hampered by the rules of the council or committee, either as to purchases or exchanges; letter from Dr. Carte to this effect, *ib.* 4591-4598. 4634-4638.

Museum of Natural History (Royal Dublin Society)—continued.

3. *Authority of the Committee of the Museum, and of the Curator, &c.*—continued.

Further explanation as to the individual authority of the director of the museum of the Dublin Society in regard to exchanges of specimens, *Andrews* 4803–4819.

4. *Value of the Collections, and Facility for their Inspection:*

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5. *Several Wants of the Museum: Aid required from Parliament:*

Recommendation by the Treasury Commissioners that a sum of 4,500*l.* should be voted for the Museum of Natural History; this amount at least is required, *Maunsell* 41, 90, 110——Particulars as to the requirements in regard to improved accommodation, *ib.* 90. 168.

Several items estimated for completing the Museum of Natural History, and for subsequently maintaining it in an efficient state, *Steele* 2781. 2783.

Belief that in England it would not be long before a remedy would be obtained for a grievance similar to that in regard to the non-arrangement of valuable specimens in the Dublin Society's Museum, *Andrews* 4558–4560——Inadequacy of one curator and a boy, who compose the present staff in charge of the specimens; increased outlay estimated on this score, *ib.* 4564–4567.

Estimates of the amounts required for the museum accommodation, and for the annua maintenance subsequently, *App.* 330, 331.

Steps taken since the year 1854 to improve the accommodation, previously very insufficient; large sum raised in addition to grants from Parliament, *Rep.* viii——Estimate made that a sum of 4,500*l.* is still required to complete the accommodation, th Treasury Commissioners of 1862 recommending that this amount should be granted, *ib.*——Reference to the estimate of the council of the society that a sum of 1,700*l.* is required fully to maintain the museum, the sum available being only 650*l.*, *ib.*

6. *Suggested Transfer of the Collections to a Central National Institution:*

Witness would transfer the natural history collections of the Royal Dublin Society to the proposed national institution in Dublin, *Wright* 3890–3893.

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National Gallery of Ireland:

1. *Proposed Commutation of the Rent payable from the National Gallery to the Royal Dublin Society.*
2. *Objections to the Contemplated Use of Portion of the Building for the Geological Survey Collections.*
3. *Statement in favour of the Transfer of the Geological Collection.*
4. *Financial Condition of the Institution; Expediency of increased Aid from Parliament.*
5. *Inquiry by the Treasury Commission of 1862.*

1. *Proposed Commutation of the Rent payable from the National Gallery to the Royal Dublin Society:*

Explanation as to the Royal Dublin Society having proposed to commute a rent of 100*l.* a year from the National Gallery for a sum of 3,000*l.* for premises for the Agricultural Department; state of arrear of this rent, *Maunsell* 171–173. 181–188——Further statement as to the Society having proposed to give up the rent of 100*l.* a year, professed to be paid by the National Gallery in Dublin, for a grant of 3,000*l.*, *ib.* 280–283.

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1. *Proposed Commutation of Rent payable from the National Gallery, &c.*—cont^d.

rence of the Science and Art Department as to this rent, *Steele* 2909–2920——Approval by the department of the proposed commutation of this rent for a sum of 3,000 *l.*, *ib.* 2921–2925.

Witness recommended, in his report in December 1861, that the rent payable by the National Gallery should be capitalized, but this was objected to by the Treasury, *Donnelly* 5673–5675.

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2. *Objections to the Contemplated Use of Portion of the Building for the Geological Survey Collections:*

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Objections on the part of the National Gallery against the proposed transfer of the Irish geological collection to any portion of the premises of the National Gallery, *Mulvany* 1616. 1645——Statement that if Marsh's Library be not removed to the National Gallery, the portion of the building intended for the library should be appropriated to sculpture and other collections, *ib.* 1616–1618. 1639–1649. 1667, 1668——Circumstances under which 5,000 *l.* was contributed to the building by the trustees of the Dargan Fund, *ib.* 1616. 1658, 1659.

Inadequacy of the available rooms at the National Gallery in Dublin for the exhibition of the geological collections, *Jukes* 2274–2278——Evidence to the effect that certain rooms in the National Gallery of Pictures in Dublin are quite inadequate for the geological collections of Ireland, *Sir R. T. Murchison* 4202–4206. 4212. 4215. 4217.

3. *Statement in favour of the Transfer of the Geological Collections:*

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4. *Financial Condition of the Institution; Expediency of increased Aid from Parliament:*

Smaller Parliamentary grant to the Irish National Gallery than to the Scotch National Gallery; that is, for the building, *Mulvany* 1619, 1620——Difficulty in regard to the payment of ground rent, there being several years in arrear; statement hereon as to the building being vested in trustees, *ib.* 1621–1625. 1650–1655——Receipt of an annual grant of 500 *l.*, there having been also a grant of 2,500 *l.* for purchases, and of 983 *l.* for furniture, painting, &c., *ib.* 1629–1635. 1646. 1673——For maintenance purposes the grant should be from 800 *l.* to 1,000 *l.* a year, *ib.* 1636–1638——Statement as to pictures from the National Gallery in London having been deposited at the Dublin National Gallery; claim to a grant of pictures from the Central Authorities, *ib.* 1661–1666. 1669–1673.

5. *Inquiry by the Treasury Commission of* 1862*:*

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Organic Chemistry. Advantageous results from the study of organic chemistry; suggestion hereon for extending the advantages of witness's laboratory at the Museum of Irish Industry, *Galloway* 3660, 3661.

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Parliamentary Grants. Arrangements and conditions under which it was suggested that the funds for other institutions in Dublin should be paid through the medium of the Dublin Society, *Maunsell* 41, 42——Objections made by other societies in Dublin to be paid through the medium of the Royal Dublin Society, *ib.* 42——Disapproval by the Royal Dublin Society, as well as by the other societies concerned, if the proposition of the Commissioners of 1862 in regard to the Dublin Society exercising any supervision over the allocation of the grants by the several societies, *Lloyd* 1171. 1179–1182.

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Witness strongly objects to the proposal that all the grants should be paid through the Dublin Society, and that the society should thus exercise a supervision over the other institutions, *Graves* 5099–5102. 5222–5226.

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Peel Sir Robert (*The late*). Original establishment of the Museum of Irish Industry, adverted to in connection with the transfer of educational functions to it, and the views of the late Sir Robert Peel on the subject, *Steele* 2683-2688——Understanding as to the late Sir Robert Peel having been favourable to the system of an extended industrial school as contemplated by witness, *Sullivan* 3487–3489.

Playfair, Dr. Lyon. Minute prepared by Dr. Lyon in 1854, adverted to as constituting the basis of the educational arrangements intended to be carried out by the Museum of Irish Industry, *Sir R. Kane* 1444–1449——Referred to the proposition by Dr. Playfair in 1854, for relieving the Royal Dublin Society of its educational staff, and the opposition made thereto so that a compromise was come to, *Jukes* 1954——The suggestions of witness correspond in principle with what was recommended by Dr. Playfair, *Sullivan* 3473. 3499–3501——Foundation of Dr. Playfair's Minute in 1854, upon a certain memorandum drawn up by Mr. Cole in the previous year, intention of this minute to give extended functions to the Industrial Museum, *Donnelly* 5518–5523.

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Portlock Collection. Reference to the Portlock collection of Irish fauna and flora as having been only temporarily placed in the Museum of Irish Industry, *Rep.* xii——The collection should be removed to the Museum of the Royal Dublin Society when in a condition to receive it, *ib.*

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Private Enterprise. Inaccuracy of the view that scientific or industrial instruction by means of Government is an interference with private enterprise, *Sir R. Kane* 1333. 1335——The proposed school of science, as under witness's scheme would not interfere with any private enterprise, *Sullivan* 3251 —— Inadequacy of private enterprise to organise a proper system of scientific instruction, *ib.* 3262. 3264–3268.

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Promotion of Officers (*Museum of Irish Industry*). Suggestion that the officers of the museum be promoted as in other Government departments, *Galloway* 3682.

Provincial Lectures:

1. *Origin of these Lectures.*
2. *System upon which Conducted.*
3. *Valuable Operation of the Lectures.*
4. *Exceptions taken to the Examinations.*
5. *Attendance of Roman Catholics and of Protestants.*
6. *Financial Particulars: want of increased Aid from Government.*

1. *Origin of these Lectures:*

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2. *System upon which Conducted:*

Particulars as to the system upon which the provincial lectures are conducted, the staff of lecturers employed, number and class of persons attending, &c., *Sidney* 1686 *et. seq.*——System in regard to applications by country towns, and the consideration of such applications, with respect to lectures being delivered in any locality, *ib.* 1681. 1691–1693——Condition as to the locality paying 10*l.* in aid of the funds of the committee, *ib.* 1686–1692.

Explanation of the principle upon which some towns are selected for lectures, whilst applications from other towns are refused; absence of all considerations of a religious, political, or personal character, *Sidney* 1694–1699. 1714–1726——Paucity of funds which compels the committee of lecturers to restrict the lectures, and to refuse many applications, *ib.* 1694. 1696–1699. 1706–1717——Explanation as to large towns not being always preferred, and as to the preference frequently given to applications from small towns not having had a course previously, *ib.* 1694–1699. 1714–1720.

Answer to an objection by Mr. Dowling as to the superficial instruction given by a course of only nine lectures in any locality, *Sidney* 1700–1703. 1705–1711 —— Statement in defence of the interval between the lectures and the examinations, *ib.* 1704—— Obstacles to the delivery of provincial lectures in the winter, *ib.* 1707–1710——Denial of a statement by Mr. Dowling that the lecture system and the class system are antagonistic, *ib.* 1712, 1713. 1802, 1803.

Inaccurate assumption by Mr. Dowling as to the lectures having been intended for the large towns, *Sidney* 1714–1718——Inaccuracy also of a statement by Mr. Dowling that the lectures are principally confined to watering places, &c., *ib.* 1714–1717——Care taken that the lectures are delivered in a suitable building, and that there is no exclusion on religious or political grounds, *ib.* 1721–1726.

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3. *Valuable Operation of the Lectures:*

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Very general appreciation of the lecture system by the different localities; communications from Sir John Young, and Dr. Robinson of Armagh, adverted to hereon, *Lloyd* 1033–1038——Successful operation of the system of provincial lectures since their first establishment, *ib.* 1036. 1098–1108——Circumstance of the science and art department having omitted to print the communications submitted by the committee of lecturers as to the local appreciation of the lectures, *ib.* 1039–1043.

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3. *Valuable Operation of the Lectures*—continued.

Witness lectures in the provinces under the committee of lectures, and shows that the provincial lectures operate very satisfactorily, *Barker* 1261–1271——Valuable effects now being produced by the system of provincial lectures in Ireland, *Sir R. Kane* 1404——Effect of the provincial lectures in increasing the usefulness of existing institutions, and in leading to the formation of new institutions, *Sydney* 1751–1753——Valuable operation of the provincial lectures in directing attention to scientific study, and in leading to the formation of science classes, *ib* 1791–1796. 1802, 1803——Decided approval of the system of provincial lectures, and of their being carried out by the committee of lectures; their advantage as an aid to scientific schools, *Jukes* 1984-1992. 2016-2018.

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Circular, dated 12th September 1860, requesting communications from local committees or institutions on the subject of the provincial lectures, *App.* 373——Reports in reply to the foregoing circular; considerable value attached by the provincial towns to the lectures, *ib.* 373–378.

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4. *Exceptions taken to the Examinations:*

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5. *Attendance of Roman Catholics and of Protestants:*

Difficulty on the part both of Roman Catholics and Protestants as to attendance at the lectures, the latter, however, not objecting on religious grounds, *Sullivan* 3388–3403——Apathy on the part of the Roman Catholic laity in regard to scientific education, and check thereby to the usefulness of the provincial lectures, *ib.* 3592–3595.

6. *Financial Particulars; want of increased Aid from Government:*

Statement as to Dr. Sidney, the inspector of the Irish science schools, being paid out of the 500*l.* allocated by Government to the committee of lectures, the grant of 400*l.* for examinations in connection with the lectures having been withdrawn, *Lloyd* 1044–1063. 1109–1119——Comment upon the withdrawal by the Science and Art Department of the grant of 400*l.*, *ib.* 1047. 1052–1057. 1106–1120——Reference to the circumstance of the Science and Art Department having suggested that Dr. Sidney might receive 250*l.* out of the grant of 500*l.*; comment upon this proposal, *ib.* 1058–1063.

The salaries of the professors are 200*l.* a year, want of funds preventing their being increased, *Barker* 1272–1274.

The salary of witness as secretary to the committee of lectures is 50*l.* a year and a fee of 2*l.* a day, besides travelling expenses for inspections in the country, *Sidney* 1675–1678. 1862——Intention some years since to fix the remuneration at 250*l.* a year, *ib.* 1677. 1862—— Error made by Mr. Dowling in regard to the proportionate cost of the lectures in different years, *ib.* 1727, 1728——Very inadequate funds at the disposal of the committee of lectures since the reduction of the grant to 500*l.*, *ib.* 1855–1859. 1861.

Reference to a report by the Committee in 1854, in which it is urged that the grant should be 1,000*l.*; if this amount were now given it should be allotted partly to the encouragement of science classes and partly to additional provincial lectures, *Sidney* 1856–1861.

Expediency of increasing the grant for the lectures to 1,000*l.*, *Steele* 2871——Communication from the Irish Government in April 1842, as to the conditions upon which a sum of 300*l.* was granted by the Treasury for the provincial lectures; readiness displayed hereon by the Society to comply with the views of Government as to the conduct of the lectures, *ib.* 3143–3145.

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Queen's Colleges. Nature of the responsibility on the part of those entrusted with the control of the Queen's Colleges, as regards the education of the students, *Sir R. Kane* 1515-1518——Circumstance of Government having, in the case of the Queen's Colleges, recognised the principle of State assistance to the middle classes, *Sullivan* 3261. 3263-3268.

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Royal Agricultural Society of Ireland. Harmonious and cordial relations existing between this Society and the Royal Dublin Society, *Maunsell* 250-253.

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Royal Dublin Society:

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2. *Alterations and Suggestions by the Select Committee of 1836.*
3. *Number and Class of Members; absence of Religious or Political Bias.*
4. *Honorary Members.*
5. *Absence of Bias in the Operations of the Society and the Appointment of its Officers.*
6. *Exceptions taken to the Constitution of the Society.*
7. *Committees.*
8. *Executive Council; intended re-constitution of this Body.*
9. *Evidence opposed to the exercise of Educational Functions by the Society.*
10. *Evidence to a contrary purport.*
11. *Suggestions as to the proper Functions of the Society.*
12. *Relations between the Society and the Museum of Irish Industry.*
13. *Question as to a Diminution of Members' Privileges.*
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15. *Suggestion by the Commissioners of 1862 as to the Society distributing the Grants to other Institutions in Dublin; Objections thereto.*
16. *Recommended clear Distinction between the Functions of the Society and of the Museum of Irish Industry, if not amalgamated.*
17. *Financial Wants of the Society; Estimates on the subject.*
18. *Claims of the Society to increased Aid from the State.*
19. *Actual Receipts from Parliamentary Grants, Members' Subscriptions, &c., at different periods.*
20. *Expenditure, under various Heads.*
21. *Suggestions in regard to the Allocation of the Grant.*
22. *Number of Visitors to the several Departments of the Society.*
23. *Plan of the Society's Premises.*
24. *Conclusions and Recommendations of the Committee; suggested Transfer of Educational Functions from the Society, increased Aid being recommended in respect of several of the Departments.*

1. *Origin and earlier Functions of the Society:*

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2. *Alterations*

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2. *Alterations and Suggestions by the Select Committee of 1836:*

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3. *Number and Class of Members; absence of Religious or Political Bias:*

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4. *Honorary Members:*

Mode of election of honorary members of the Society; gratification expressed by persons thus appointed, *Steele* 3124–3129.

5. *Absence of Bias in the Operations of the Society, and the Appointment of its Officers:*

Statement as to the entire absence of religious or sectarian influence in the operations of the Royal Dublin Society, *Lloyd* 1138–1141; *Sidney* 1815, 1816——Witness has been a member of the Royal Dublin Society since 1847 or 1848, and testifies to the absence of all political and religious feeling in the operations of the Society, *Barker* 1257–1260.

Very eminent men who have been elected as professors of the Society, *Steele* 2926–2930——Statement as to a Roman Catholic clergyman having been librarian of the Society, and having been very liberally dealt with out of the Society's funds, *ib.* 3048–3053——Absence of religious or sectarian influence in the appointment of officers of the Society, *Waller* 4457–4459——Selection of the professors with reference solely to their qualifications, *Andrews* 4763–4766.

6. *Exceptions taken to the Constitution of the Society:*

Witness objects to the constitution of the Dublin Society, as not properly representing the mercantile and middle classes, nor the Roman Catholic community, *M'Evoy* 389–405. 563–574——Very few Roman Catholics who have ever been on the council of the Society; comparatively few who are members of the Society, *ib.* 394–406——Necessity of pressure upon the Dublin Society, in order to obtain proper facilities of admission to the institutions under its charge, *ib.* 414–418. 519.

Remarks on the circumstance of there not being any Roman Catholic clergyman a member of the Society, *M'Evoy* 462–475——Minority of the mercantile classes in the Dublin Society further adverted to, *ib.* 757–759——The fact that the popular interest has not practically much to do with the Dublin Society is the main objection to the Society, *ib.* 790.

7. *Committees:*

Several committees or departments into which the Society is divided, *Maunsell* 67–70——Selection of the committees of the Society with special reference to the qualifications of the members for the particular duty, *Lloyd* 1160–1162.

Absence of all religious and political considerations in the election of members of the Society or of its council or committees, *Steele* 2463, 2464. 2467——Harmonious operation of the committees within themselves and with the Society at large, *ib.* 2465, 2466.—— The Commissioners of 1862 did not recommend any alteration in the number or powers of the committees; system of transaction of business by the committees adverted to hereon, *ib.* 2468–2473——Small proportion of Roman Catholic life members or annual members; impartial constitution of the committee and council adverted to hereon, *ib.* 3025. 3032 3057–3059——Full representation of the commercial and middle classes upon the committees

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7. *Committees*—continued.

mittees of the Society without the slightest reference to political or religious considerations, *Steele* 3078-3085.

Regular attendance at the committees of the Society, *Wright* 3870——Evidence as to the total absence of religious bias in the selection of members to serve on committees, *Waller* 4450-4457.

Selection by the Society at large of the members of the several committees, reference being had exclusively to the fitness of those selected, *Andrews* 4583-4586. 4762——Advantages anticipated from a reduction of the number of members on each committee from eleven to seven, *ib.* 4639-4646——Non-interference of the committees with the professors, *ib.* 4770-4772.

8. *Executive Council: intended Re-constitution of this Body:*

Respects in which the system of an executive council of the Society as recommended in 1836 has not worked well, nor in harmony with the general Society, *Maunsell* 33-38——Circumstances in connection with the inquiry of a Treasury Commission in 1862, which recommended, among other alterations, that the council of the Society should be vested with full executive authority, *ib.* 40-42——Steps taken by the Society towards the revision of the charter, when, in July 1863, a communication was received from the Treasury that any further proceedings in the matter should be suspended, *ib.* 42-47——Entire willingness of the Society to carry out to the full the recommendations of the Treasury in order to give plenary powers to the executive council; considerable cost of a new charter adverted to hereon, *ib.* 231-233. 244.

Statements as to the entire readiness of the Dublin Society to change the constitution of their council; suspension of the change merely through the action of the Treasury, *Sidney* 1804-1814——Expediency of the proposed change; part taken by witness in first recommending it, *ib.* 1808, 1809.

Approval of the change recommended in the constitution of the Royal Dublin Society and its council by the Commissioners of 1862, *Lord Talbot de Malahide* 2337-2342——Harmony and natural co-operation between the Society and its council, *ib.* 2351-2353.

Statement as to the council of the Royal Dublin Society not having at present power to enforce any regulations it may originate, *Steele* 2451-2455——Entire willingness of the Society to adopt the recommendations of the Commissioners of 1862, for giving full executive powers to the council; previous steps taken in the council and by the Society with a view to enlarged powers in the council, *ib.* 2456-2462——Letter from the Treasury adverted to as the cause of not carrying out the proposed alteration in the constitution of the council, *ib.* 2460, 2461——Circumstance of the Society having suggested that some of the council should be nominated by the Crown, *ib.* 3098.

Grounds for apprehending prejudice or detriment to the public interest under the amended constitution of the council of the Dublin Society, as recommended by the Commissioners of 1862, *Wright* 3919-3931.

Alterations prescribed by the Commissioners of 1862 in the Council of the Dublin Society as a condition of increased Government aid, *Donnelly* 5548——Readiness of the Society to adopt the required changes in the council, *ib.* 5550-5552.

9. *Evidence opposed to the exercise of Educational Functions by the Society:*

Details as to the defects of the present system of lectures and of professors, and the existing arrangements in these respects, *M'Evoy* 576-595. 687-689; *Corrigan* 840 *et seq.* *Barker* 1243-1256; *Sir R. Kane* 1346-1358. 1418, 1419. 1426-1432; *Jukes* 1954-1968; *Sullivan* 3189-3195; *Galloway* 3642-3644.

Witness objects to Government devolving educational functions upon any private society constituted chiefly of a particular class or denomination like the Royal Dublin Society, *M'Evoy* 734-740——Witness cannot say, however, that anything of a sectarian character has ever been stated at the lectures of the Society, *ib.* 741, 742——With regard to a certain former remonstrance by the Society upon a question of the withdrawal of part of their staff, this was but natural, *ib.* 750-753.

Grounds for concluding that the Royal Dublin Society, as being a large and popular Society, is likely to be led by prejudices, and is not competent to regulate scientific education, *Corrigan* 809 *et seq.*——Approval of a proposition for relieving the Dublin Society from its functions in regard to the supervision of scientific education, as by the appointment of professors, *ib.* 832-850.

Further examination upon the question of the unfitness of the Society to superintend scientific instruction, on account of its constitution, and the system of its council being elective, *Corrigan* 836 *et seq.*——Actual constitution of the committees of the Dublin Society adverted to with reference to the question of their fitness to control a system of lectures and of scientific education; though these committees may have been most admirable

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9. *Evidence opposed to the exercise of Educational Functions by the Society*—cont^d.

there is no security for their continuing to be so, *Corrigan* 888–901——On the whole witness concludes that a large popular society is a most unsuitable body to undertake or direct the mode of carrying out scientific education, *ib.* 902–906.

Experience upon which witness considers that it would be better if the professors or lecturers were under a permanent single head instead of under a fluctuating body, like the committees of the society, *Barker* 1223–1238. 1275–1281——Approval of a proposition for relieving the society from the direction of scientific education, *ib.* 1239–1242——Witness has not been unduly interfered with in respect of the lectures at the Royal Dublin Society, but the committee are a changeable body, *ib.* 1275–1281——He sees no objection to the lectures being given within the four walls of the society, *ib.* 1282.

Respects in which the Royal Dublin Society, as being a popular and fluctuating body, are not calculated to direct efficiently an extended education system, *Sir R. Kane* 1315——Further statement that the Royal Dublin Society, or any society similarly constituted, is altogether unfit to be entrusted with the charge of scientific education in Ireland, *ib.* 1375–1378. 1421——Opinion that the efficiency of the society would not be at all impaired if it were deprived of its educational functions, *ib.* 1417, 1418. 1426——A scheme of real industrial education could not in fact be carried out by such a body as the Dublin Society, and any attempt to do so would be dangerous to the society, *ib.* 1425. 1463–1466. 1489.

Objection to a system whereby the Royal Dublin Society, or the council, might appoint an individual in charge of the lectures and of scientific education generally, *Sir R. Kane* 1586–1598.

Reference to the proposition by Dr. Playfair in 1854, for relieving the Royal Dublin Society of its educational staff, and the opposition made thereto, so that a compromise was come to, *Jukes* 1954——Reasons for objecting to the proposal of the commissioners of 1862, that witness should be attached, as lecturer, to the Royal Dublin Society, *ib.* 1975–1977——Objections to any system of scientific education in Ireland being entrusted to a fluctuating and unscientific body like the Dublin Society, instead of an individual directly responsible to Government, *ib.* 1977–1983——Absence of any analogy between the Dublin Society and the Electoral Roll of Cambridge, *ib.* 1983.

Consideration of witness's grounds for the conclusion that professors would in all probability be subject to a very annoying action if placed under the council or committees of the Dublin Society, *Jukes* 2156–2194——Witness objects to being placed under any one except he be a man of science, *ib.* 2186, 2187——Further reference to the Electoral Roll of Cambridge, and their action in the election of professors; very different constitution of their body and of the Royal Dublin Society, *ib.* 2195–2210——Statement as to witness in his capacity of lecturer at the Museum of Irish Industry, being subject to the control of Sir R. Kane; his willingness to submit to all proper control, *ib.* 2223–2231.

Further objections to any system of the council of the Royal Dublin Society, or to any other council or committee as a means of control of professors of scientific education, *Jukes* 2331–2334.

Objection to a large private society like the Dublin Society being entrusted with the management of national museums and of national industrial education, *Sullivan* 3303–3306——Opinion that the society should be deprived of their educational functions and limited to exhibitional functions, *ib.* 3325, 3326——Inexpediency in any case of Government control and State support being exercised and administered through a fluctuating body like the Royal Dublin Society, *ib.* 3569–3571.

Disapproval of an extended system of lectures being under a fluctuating body like the Royal Dublin Society or its council, *Morgan* 3730–3736. 3743–3746. 3763. 3773.

Character of the collection of the Dublin Society adverted to with reference to the expediency of a transfer of the economic collections to a national museum, *Wright* 3830–3838——Strong objection to a public museum being under a private body, *ib.* 3837——Witness would not entrust the Dublin Society with any educational functions whatsoever, *ib.* 3854, 3855——Doubt whether the Dublin Society is really a popular or unpopular body, *ib.* 3912–3918.

Witness fully admits the eminent character of the individuals on the council and committees of the Royal Dublin Society, and testifies to the great utility of the society, but considers that any voluntary association is not a desirable body for the carrying out of an extended educational system, *Graves* 5153 *et seq.* 5214–5221.

10. *Evidence to a Contrary Purport:*

Contemplated formation of a special and permanent committee for the superintendence of the lectures if the society were entrusted with extended educational functions, *Lloyd* 1162. 1172–1177——Dissent from the view that the popular constitution of the Dublin Society renders it less effective in its scientific instruction, *ib.* 1176–1178——Advantage

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10. *Evidence to a Contrary Purport*—continued.

of the museum or collections of the Dublin Society in carrying out extended educational functions, *Lloyd* 1192–1195.

Recommendation that if the educational arrangements were all under the Dublin Society they should be subject to a small and permanent committee, as suggested by Dr. Lloyd, *Sidney* 1771. 1782–1784——Belief as to the fitness of the Royal Dublin Society for carrying out the educational functions of both institutions; system of appointment of professors at Cambridge adverted to hereon, *ib.* 1783–1790.

Opinion as to the entire fitness of the Royal Dublin Society to carry out an extended system of scientific education, if the Museum of Irish Industry were amalgamated with the society, *Lord Talbot de Malahide* 2408–2413. 2417. 2442–2448.

Restoration of certain educational functions to the Royal Dublin Society, if the report of the Commission of 1862 were carried out, *Donnelly* 5545, 5546——Conclusion as to the fitness of the society, its council being re-constituted, to undertake the functions proposed to be entrusted to it by the Commissioners of 1862, *ib.* 5549. 5553.

11. *Suggestions as to the proper Functions of the Society:*

Approval of the society exercising functions similar to those exercised by the trustees of the British Museum, *Sir R. Kane* 1376——The society should in fact be restricted to exhibitional functions, *ib.* 1417. 1426. 1428. 1489——The functions of the Dublin Society should comprise agriculture, and the animal and vegetable kingdom generally, *Jukes* 2011–2013.

Professorships of agricultural chemistry, of botany, and of geology, should in any case be maintained in connection with the Royal Dublin Society, *Lord Talbot de Malahide* 2442.

Direct influence of the Dublin Society upon education if it confined itself to exhibitional functions and scientific meetings, *Sullivan* 3404, 3405——Much too large scope embraced by the Royal Dublin Society, *Galloway* 3632–3635——Approval of the exhibitional and agricultural departments of the Dublin Society being liberally supported, whilst their educational functions should be restricted, *Morgan* 3743–3750.

Professors necessary in order to carry out the proper objects of the society, *Andrews* 4163–4165——Functions irrespective of scientific education, to which the Dublin Society should be restricted, *Graves* 5139–5141.

12. *Relations between the Society and the Museum of Irish Industry:*

Statement as to the Dublin Society having previously to 1862, looked upon the Irish Industrial Museum with jealousy; official letters in 1854 adverted to hereon, *M'Evoy* 366–368. 512, 513. 553–562.

Harmonious relations between the Royal Dublin Society and the Museum of Irish Industry; absence of display of hostility by the former to the latter, *Steele* 2648, 2649. 2679–2681——Examination as to the objects of a deputation of the society to the Board of Trade in 1854; the chief object was to remonstrate against the proposed deprivation of their educational staff and functions, but the society also objected to the maintenance of the Museum of Irish Industry, *ib.* 2954–3003.

Feeling of rivalry and jealousy on the part of the Dublin Society towards the Industrial Museum; way in which this feeling has been manifested, *Sullivan* 3327–3331. 3345–3349. 3564.

Co-operation rather than rivalry between the Royal Dublin Society and other scientific societies in Dublin, *Andrews* 4752–4759.

13. *Question as to a diminution of Members' Privileges:*

Anticipated diminution in the number of subscribers if the few privileges now enjoyed by them were curtailed; such as the privilege of borrowing books from the library, *Maunsell* 237, 238; *Sidney* 1892–1895; *Waller* 4448, 4449. 4537–4542.

Limited privileges desirable in the members of the society, *M'Evoy* 800——With regard to a restriction of members' privileges leading to a falling off in the subscriptions, witness considers that Government may well make up the deficiency, and that a proper expression of public opinion would lead to this result, *ib.* 801–805.

Question as to the privileges which might still be exercised by members of the Royal Dublin Society, if the museum, library, and botanical gardens were placed under one establishment directly controlled by Government, *Wright* 4105–4114——With regard to the large number of life members who have subscribed their twenty guineas each, witness approves of their privileges being almost entirely swept away, and has been told by several members that they would not object, *ib.* 4109–4123.

14. *Inexpediency of any undue interference with the Society:*

Great importance attached to the well being of the Royal Dublin Society, *Corrigan* 836. 864——Great misfortune if the Royal Dublin Society were interfered with in the performance

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14. *Inexpediency of any undue interference with the Society*—continued.

performance of its proper functions, *Sir R. Kane* 1416——Opinion that the society has done, and is competent to continue to do, vast service to the country, *ib.*

Enumeration of several important advantages arising from such functions as are administered by a society like the Royal Dublin Society, *Steele* 3004–3007——Large amount of efficient and unpaid labour devoted to the administration of the society, and of its collections and agricultural shows, &c., *ib.*

Witness disclaims any desire to see the Royal Dublin Society absorbed under the system advocated by him, *Sullivan* 3564–3567.

Statement as to witnesses's attention having first been directed to scientific pursuits through the Royal Dublin Society, *Andrews* 4760. 4761——Material advancement of scientific education in Ireland by means of the Dublin Society; increased advantage if its funds were increased, *ib.* 4767–4769. 4831, 4832——Necessity of the society now operating scientifically rather than popularly, *ib.* 4829–4834——Several institutions altogether independent of the Royal Dublin Society, *Graves* 5103. 5228–5241.

15. *Suggestion by the Commissioners of* 1862 *as to the Society distributing the grants to other Institutions in Dublin: Objections thereto:*

Arrangements and conditions under which it was suggested that the funds for other institutions in Dublin should be paid through the medium of the Dublin Society; objections thereto by the societies, *Maunsell* 41, 42——Disapproval by the Royal Dublin Society, as well as by the other societies concerned, of the proposition of the Commissioners of 1862 in regard to the Dublin Society exercising any supervision over the allocation of the grants by the several societies, *Lloyd* 1171. 1179–1182.

Decided objection to certain passages in the Report of the Commissioners of 1862 on the subject of a control in the Royal Dublin Society over other institutions, *Graves* 5099–5102. 5222–5226.

16. *Recommended clear distinction between the functions of the Society and of the Museum of Irish Industry if not amalgamated:*

Recommendation that if it be determined still to maintain both the Royal Dublin Society and the Museum of Irish Industry, the functions of each institution should be rendered entirely distinct, so as to avoid the possibility of clashing; suggestions for carrying out this distinction, *Lloyd* 1283, 1284——Proposition on the score of the distinction to be observed, and the functions to be performed by each institution, *Sir R. Kane* 1370, 1371. 1418, 1419. 1426–1432; *Jukes* 2009–2015.

17. *Financial wants of the Society: Estimates on the subject:*

Items comprising a total of 9,500*l.* which the Treasury Commissioners of 1862 recommended should, under certain circumstances, be granted to the society, *Maunsell* 41. 94–113——Circumstance of there being but two professorships attached to the society, with salaries reduced to 150*l.* a-year; want of means for increasing the salaries, as recommended by the Parliamentary Committee of 1836, *Lloyd* 1142–1145——Necessity of increased aid from Government in order to render efficient the educational operations of the society, *ib.* 1163–1169.

Complete state of the building of the society, whilst there is a most urgent want of fittings and furniture, *Steele* 2694–2705——Application made to the Treasury for the sum of 4,500*l.* to complete the furnishing and fitting of the society's rooms, *ib.* 2717——Recent preparation by the council of the society of estimates of the sums required to complete the several departments, and of the further annual sums required to maintain them efficiently; particulars hereon, *ib.* 2780–2790——Items comprising a total of 16,605*l.* estimated for completing the several departments, *ib.* 2781——Items estimated on the score of an enlarged and efficient staff, &c.; estimated increase of from 5,650*l.* to 9,204*l.*, *ib.* 2782–2784.

Necessity of the increased grants estimated by the council of the Society in order to carry out efficiently the operation of the several departments, *Andrews*, 4716–4718.

Witness made careful inquiry into the estimate of the Royal Dublin Society as to the wants of the Society, and came to the conclusion that the estimate was a very fair one, *Donnelly* 5507–5512.

Estimate of the sums that are necessary to complete the different departments of the Royal Dublin Society; total of 16,560*l.* 10*s.*, *App.* 330——Estimate of the sums that will be required to defray the expenses of the Society for one year, when the several departments of the Society shall have been completed; total of 9,304*l.* 15*s.* annually, the present scale or amount being 5,650*l.*, *ib.* 330, 331.

18. *Claims of the Society to increased Aid from the State:*

Evidence relative to the large amount of private subscriptions in proportion to the public grants; argument as to the claim of the Society on this score to increased aid from

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18. *Claims of the Society to increased Aid from the State*—continued.

Parliament, *Maunsell* 20-24. 118-136——Complaint that, the council of the Society having been revised, and other recommendations of the Treasury assented to, the grant of 9,500 *l.* should have been withheld and the proceedings stayed, *ib.* 42-50——Small private subscriptions of various other institutions in comparison with the public grants, *ib.* 128.

Recommendation by the Select Committee of 1836 that Parliament should extend an increasing liberality to the Society; on the contrary, the means of the Society have been greatly restricted whilst its wants have been immensely increased, *Maunsell* 139-145——Readiness of the Society to recognise public control in every department if it received adequate aid from Parliament, *ib.* 146-148——Necessity of supplementing the Parliamentary grant by the private subscriptions in order to meet the expense in the several departments, *ib.* 160-164——Grievance involved in the limited aid received from Parliament as compared to the liberal aid to kindred institutions, *ib.* 258-262.

Effect of the reduction of the grant to the Society in causing the inefficiency of the several departments, *M'Evoy* 661, 662——Readiness of the Society to admit full Government control over the allocation of an increased grant, *Lloyd* 1166, 1167——Claim of the Society to a more liberal support from Parliament; reference hereon to the liberal grants to similar institutions in England, *Sir R. Kane* 1417. 1426.

19. *Actual Receipts from Parliamentary Grants, Members' Subscriptions, &c., at different Periods:*

Amount of grants received by the Society in different years previously to the Union, *Maunsell* 6. 7. 14——Grant of 10,000 *l.* Irish received by the Society in each of the first twenty years after the Union, *ib.* 15——From 1819 to 1830 the grant averaged 7,000 *l.* a year, *ib.* 16——Since 1853 the grant has been fixed at 5,500 *l.*, *ib.* 17-19.

Much larger proportion now borne by the private subscriptions to the public grant than during the period from 1800 to 1830, *Maunsell* 20-24——The grant to the Society is in fact only 5,500 *l.* a year, *ib.* 116. 120-122——Amounts received by the Society from agricultural or cattle shows and from miscellaneous sources generally, *ib.* 126. 133, 134.

Large sum represented by the payments of the life members of the Society, these constituting more than two-thirds of the entire number of members, *Steele* 3017-3022.

Memorandum as to members' subscriptions in each of the years 1843-64, *App.* 327——Summary of the Society's funds, exclusive of Parliamentary grants, *ib.*

Income of the Society for nine years ending 31 March 1864, exclusive of the annual Parliamentary grant for general purposes, and occasional votes for buildings and repairs; average of 4,459 *l.* 12 *s.* 6 *d.* per year, *App.* 328.

Statement of the sums raised by local and private subscriptions, and applied by the Society to the buildings and works of the Museum of Natural History, the Library, the Agricultural Hall; and what, if any, specific funds have been voted by Parliament, *App.* 341.

Return of the annual sums received for members' subscriptions and miscellaneous sources of the Society, from 1 January 1800 to 31 March 1864, inclusive, *App.* 342.

20. *Expenditure under various Heads:*

Particulars as to the appropriation of the 5,500 *l.* a year granted by Parliament, *Maunsell* 149-153——With regard to certain items for repairs in the estimate for 1864-65, this matter rests with the Board of Works, but has no reference to any of the additional buildings referred to by witness, *ib.* 291, 292.

Statement of the expenditure of the Society for the year ended 31 March 1864, arranged under different heads, *App.* 329.

Annual average expenditure of the Society for nine years, from 1 April 1856 to 31 March 1864, both inclusive, *App.* 339.

Statement showing the allocation of the Parliamentary grant to the several departments of the Society in the year ended 31 March 1864; the actual expenditure under the same heads, thus exhibiting how far the grants have been supplemented from the members' subscriptions and miscellaneous receipts in the same period, *App.* 340.

21. *Suggestions in regard to the Allocation of the Grant:*

Expediency of the Government grant to the Society being allocated exclusively to the library, museum, and gardens, and of these being placed directly under Government, *Wright* 4139-4149——Opinion that the public funds should be confined to the scientific and more public objects, and that the subscriptions should be appropriated rather to the agricultural shows, &c., *Andrews* 4719-4721.

22. *Number of Visitors to the Several Departments of the Society:*

Statement of the numbers visiting the departments of the Royal Dublin Society in each of the years 1854-63; total of 1,326,286 visitors in the whole period, *App.* 330.

23. *Plan*

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23. *Plan of the Society's Premises:*

Ground plan of the Society's premises, showing the arrangements of the several departments, *App.* 332.

24. *Conclusions and Recommendations of the Committee; Suggested transfer of Educational Functions from the Society, increased Aid being recommended in respect of several of the Departments:*

Summary by the committee of the earlier history and origin of the Royal Dublin Society, and of the objects of the Society, *Rep.* iii, iv——Explanatory statement by the committee relative to the constitution of the Society, and the functions of the council and committees, *ib.* v, vi.

Proof that the Government intended in 1854 to sever, as occasion offered, all connection between the educational staff and the Royal Dublin Society; Minute of 11th April 1854 adverted to hereon, *Rep.* xiv, xv——Protest by the Society, in April 1854, against being deprived of its educational functions, and against the existence of the Museum of Irish Industry, *ib.* xv.

Resolutions adverse to the technical and scientific instruction, given at the expense of the State, being entrusted to the management of a body of private gentlemen, *Rep.* xxii ——Resolution that the Society should be relieved of those educational functions, for the management of which it is not specially adapted, *ib.*

Considerations as to the expediency of increased aid in connection with several of the departments of the Society; certain conditions proposed in such case, *Rep.* xxii. xxviii-xxxii ——Expediency of an amendment in the constitution of the council, as agreed to be effected by the Society, *ib.* xxii. xxix——Objection to the proposition in regard to the grants to other institutions being paid through the Dublin Society, *ib.* xxiv.

Arguments in support of the conclusion that the Society should not be entrusted with educational functions, *Rep.* xxvii, xxviii.

See also *Adderley, Right Hon. Mr. Agricultural Department. Amalgamation. Botanical Gardens. Carlisle, Earl of. Cattle Shows. Certificates of Merit. Commission of 1862. Donations to Museums. Dowling, Mr. Evening Scientific Meetings. Exchange of Specimens. Fossils. Geological Survey and Collections, 5, 6. Haughton, Professor. Lectures. Leinster Lawn. Library (Royal Dublin Society). Manufactures, Exhibitions of. Middle Classes. Mineralogy. Museum of Irish Industry. Museum of Natural History. National Gallery of Ireland. Parliamentary Grants. Provincial Lectures. Public Schools Commission. Royal Zoological Society. School of Art (Dublin). Science and Art Department. Scouler, Dr. Shelbourne Yard. Taylor Fund. Veterinary Department. Zoological Department.*

Royal Institution (Albemarle-street). Eminent professors who lecture for the Royal Institution in Albemarle-street, and value of the lectures, *Donelly* 5554-5557.

Royal Irish Academy:

1. *Date of Incorporation of the Academy.*
2. *Constitution of the Society and of its Governing Bodies.*
3. *Relations between the Departments of Science and Antiquities; their respective Shares of the Grant.*
4. *Valuable Operation of the Institution; interesting and valuable Works in the Library and Museum.*
5. *Management of the Library.*
6. *Catalogue.*
7. *Building Accommodation.*
8. *Particulars of Receipt and Expenditure.*
9. *Treasure Trove Grant.*
10. *Representations as to the Wants of the Academy, and the expediency of increased Aid from Government.*
11. *Objections to Report of Commission of 1862.*
12. *Conclusions and Recommendations of the Committee.*

1. *Date of Incorporation of the Academy:*

The Royal Irish Academy was incorporated by Royal Charter in 1786, *Graves* 4846.

2. *Constitution of the Society and of its Governing Bodies:*

Details relative to the constitution of the Royal Academy, and of its council and committees, *Graves* 4852-4870——There are at present 355 members; terms and system of admission, *ib.* 4854-4859——Practice in regard to the election of the council and of the President, *ib.* 4852. 4868-4870——The council comprises twenty-one members, divided into three committees, *ib.* 4852——The decisions of the council are not final, *ib.* 4853,

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ROYAL IRISH ACADEMY—continued.

2. *Constitution of the Society and of its Governing Bodies*—continued.

4854——There is no sectarian or political influence exercised in regard to the admission of persons into the Society, *Graves* 4860–4865.

3. *Relations between the Departments of Science and Antiquities; their respective Shares of the Grant:*

The functions of the Society are now chiefly in the departments of science and antiquities, *Graves* 4848, 4849——Examination upon the question of antagonism in the Academy between the departments of science and antiquity; absence of any injurious results in this respect, *ib.* 4919–4923—— Disapproval of the Government grant being divided, and allocated in certain sums to science and antiquities; present practice in allocating the grants, *ib.* 4921–4926.

Witness considers that there should be separate evenings for special papers on particular subjects discussed at the Academy meetings, *Sir W. R. Wilde* 5296–5298——Suggests that a certain amount of the grant be specially allocated to the Antiquarian Department, *ib.* 5299—— This department hardly gets its fair share of the present grant, *ib.* 5299. 5305.

Witness considers that no disastrous results arise from any antagonism between the Science and Antiquities departments of the Academy, *Jellett* 5411, 5412—— He objects to any special division or allocation of the Government grant between the two departments, *ib.* 5413, 5414—— Disapproval also of separate evenings being devoted to papers on scientific and antiquarian subjects respectively, *ib.* 5415, 5416. 5447–5450——In many instances the connection between the two departments is a mutual assistance to each other, *ib.* 5417–5419.

Very limited assistance which the Academy is enabled to give to science on account of the paucity of their funds, *Jellett* 5420——Statement to the effect that the Antiquities Department of the Academy is not unfairly stinted in its portion of the grant, *ib.* 5488–5495.

4. *Valuable Operation of the Institution; interesting and valuable Works in the Library and Museum:*

Very valuable character of the scientific publication or "Transactions" of the society, *Graves* 4847—— Peculiarly fine collection of Celtic antiquities and ornaments in the museum of the Academy, *Graves* 4932, 4933. 4942–4945; *Sir W. R. Wilde* 5325, 5326 ——Instances of valuable donations to the museum, *Graves* 4946——Extent to which the Society exercises interference, or makes representation, on the subject of the preservation of ruins, crosses, &c. *ib.* 4947–4950.

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9. *Treasure Trove Grant:*

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11. *Objections to Report of Commission of 1862:*

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2. *Privileges of Members of the Dublin Society; disapproval thereof.*
3. *Objections to any Control by the Dublin Society over the Zoological Society.*
4. *Question of the Erection of a Fence; expediency of Aid from Government.*
5. *Particulars as to the Origin, Constitution, and Operation of the Society.*

1. *As to the Payment of the Parliamentary Grant through the Royal Dublin Society:*

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2. *Privileges of Members of the Dublin Society; disapproval thereof:*

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